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RENTAL HOUSING SUPPLY IN WINNIPEG: A SPATIAL PROFILE

W. David Linton

INSTITUTE of URBAN STUDIES

THE UNIVERSITY of WINNIPEG

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W. David Linton

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EXECUTIVE SUMMARY

1.0 INTRODUCTION

1.1 CONTENT

The objectives of this paper are

1. *to develop an accurate description of the Winnipeg rental housing stock, according to its spatial distribution by structural type, period of construction, and inventory share;*
2. *to identify rental housing sub-markets based on the spatial distribution of supply characteristics.*

The spatial distribution and identified sub-markets of Winnipeg's rental housing supply are compared to the conventional patterns of urban land use models, and the processes underlying these models are briefly explored. Potential areas for further research and policy development are discussed.

1.2 THEORETICAL ASSUMPTIONS

While the fundamental importance of market processes are recognized in this paper, we are primarily interested in the specific attributes of rental housing supply by which spatial sub-markets may be differentiated.

The most important basis for studying housing supply is that unlike most other market goods, each unit of housing has a unique fixed location. This intrinsic locational quality directly affects the nature of housing demand and the behaviour of the market. The locational fixity of supply determines that a metropolitan housing market is actually a combination of many unique individual markets for housing, with unique demand and supply characteristics. Variations within the rental market and its relationship to the housing market as a whole may therefore be understood as a model of nested sub-markets. These sub-markets may be defined according to specific attributes of the dwelling units such as structural type and period of construction, their location, or attributes of the consumers who demand and occupy them.

2.0 DATA AND METHODOLOGY

The major problem in defining spatial sub-markets is deciding which variables to choose, but an additional consideration is the spatial unit of analysis.

Both CMHC and Statistics Canada data have important spatial, temporal and taxonomic limitations which ordinarily make it difficult to answer descriptive questions about rental housing markets.

Specially created cross-tabulations of 1986 census data, calculated according to the City of Winnipeg Planning Department's Neighbourhood Characterization Areas (NCAs), were chosen for the research.

Those NCAs outside the City of Winnipeg's Urban Limit Line, and those NCAs which contained predominantly non-residential land uses, were excluded from all spatial analyses.

The data set was defined temporally by the census year 1986, spatially by the City of Winnipeg NCAs, and by the three variables of structural type, tenure and period of construction.

Structural type was sub-divided into three categories: single-detached, apartment buildings five storeys or greater, and "other" structural types, which included duplexes, rowhouses, townhouses, and apartment buildings less than five storeys. Tenure was defined by either rental occupancy or owner occupancy, and periods of construction were defined as 1920 or earlier, 1921-1945, 1946-1960, 1961-1970, 1971-1980 and 1981-1986.

The analysis was comprised of three main steps:

1. the aspatial analysis of the Winnipeg market, according to city-wide levels of absolute and relative rental tenure, by structural type and period of construction;
2. the spatial analysis of rental tenure, by period of construction, as well as the spatial analysis of rented structural types, by period of construction;
3. the definition of generalized spatial sub-markets by NCAs which commanded large market shares of total rental tenure, and an analysis of their composition by structural type.

3.0 GENERAL RENTAL MARKET CHARACTERISTICS IN WINNIPEG

This section considers city-wide levels of absolute and relative rental tenure, according to unit type and period of construction.

In 1986, Winnipeg contained 91,695 rental units, representing 40.44% of all occupied dwelling units.

Of all dwelling units which were rented in 1986, most were built during the 1960s (23.77%) and the 1970s (33.87%).

Of all occupied dwelling units constructed during the 1960s, 49.36% were rented in 1986, while 51.70% of all dwelling units built during the 1970s were rented in 1986.

Apartment buildings five storeys or greater represented 30.53% of the total rental stock, while single-detached units represented 12.76% of the total rental stock. "Other" units, which included apartments less than five storeys, townhouses, duplexes and rowhouses, comprised the remaining 51.97% of the total rental stock.

3.1 SINGLE-DETACHED UNITS

The vast majority (75.98%) of Winnipeg's rented single-detached units were built prior to 1961, including 1,365 units which were built in 1920 or earlier. Some 64.32% of Winnipeg's single-detached housing rented in 1986 was built during either the 1921-1945 inter-war era (31.5%) or in the 1946-1960 post-war era (32.82%).

There is an usually high ratio of rental to ownership status for single-detached units built during the inter-war period. While the proportion of rental tenure was 9.92% for pre-1921 built units and 9.62% for 1946-1960 single-detached construction, 15.32% of Winnipeg's inter-war units were rented in 1986.

The large numbers of rented single-detached units built in the inter-war era (1921-1945) suggests the importance of "inner city" neighbourhoods as a market location.

3.2 APARTMENT BUILDINGS FIVE STOREYS OR GREATER

Very few of these units (1.97%) were constructed prior to 1946, and just under half (48.05%) of the rented dwelling units in structures five storeys or greater were built during the 1970s. New construction in the rental market was dominated by "other" unit types until the early 1980s, when high-rise units dominated new construction for the first time. Between 1981 and 1986, 3480 units were built in apartment buildings five storeys or greater, compared with 3340 units built in "other" structural types.

3.3 "OTHER" STRUCTURAL TYPES

Of all "other" rented dwelling units, 54.03% were built during the 1960s and 1970s. Of the remaining "other" units, 18.43% were built during the immediate post-war period, while an additional 21.09% were built before 1946. This includes 4070 units built prior to 1921, over 700 units more than were built between 1981 and 1986.

"Other" structural types have declined in relative importance with each period of construction, but represent the largest increase in total rental stock for each period except 1981-86.

4.0 SPATIAL ANALYSIS OF SUB-MARKET VARIATIONS AMONG URBAN AREAS

This section considers the spatial distribution of rental tenure within Winnipeg, analyzed according to structural type and period of construction.

The most broadly based concentration of rental activity is found in the city's downtown area, and in the adjacent or nearby NCAs. Concentrations of rental activity comprising 50.0% to 75.0% of occupied dwelling units occur immediately outside the Central Business District (CBD), in older neighbourhoods.

Other large concentrations of rental housing are found along major thoroughfares and near shopping centres in the suburban areas. Some suburban NCAs contained between 75.0% and 100.0% rental tenure.

Those areas with the smallest proportions of rental tenure include new suburbs furthest from the CBD, and a few older, middle-class suburbs.

Most of the rented units built in 1920 or earlier were concentrated in and around the CBD. These NCAs included both socially affluent and socially underprivileged populations, suggesting that old rental stock is not a reliable indicator of urban poverty.

Inter-war construction of rented units was distributed within the pre-Unicity boundaries of the old City of Winnipeg, and within the oldest neighbourhoods of the surrounding former municipalities of St. James, St. Vital, St. Boniface, Fort Garry and the Kildonans.

4.1 SINGLE-DETACHED UNITS

While only 8.82% of all single-detached units in Winnipeg are rented, these units comprised a majority of the total rental units in a wide variety of residential neighbourhoods, serving virtually every socio-economic class.

Single-detached structures comprised the majority proportion of pre-1921 rented units in several NCAs, within Winnipeg's old West End, North End, and within individual NCAs of East Kildonan, St. James and Fort Rouge.

Single-detached units, built at successively further distances from the CBD in mass-produced post-war suburbs, command an increasing share of the single-detached rental market as they age. However, the tendency for single-detached units to transfer from owner-occupancy to rental tenure in these suburbs does not hold true for all cases. In one NCA, there was a greater tendency for rental tenure among newer single-detached units than older single-detached units.

4.2 APARTMENT BUILDINGS FIVE STOREYS OR GREATER

While rented units in high-rise apartment structures accounted for 30.53% of the total 1986 rental market, these units were concentrated in different areas of the city. High-rise units were concentrated in Winnipeg's downtown, and near the city's rivers, major thoroughfares and shopping centres.

The gradual expansion of high-rise construction to suburban areas began during the inter-war period, westward along Portage Avenue and to the immediate southwest of the CBD.

During the post-war era of 1946-1960, the linear development of high-rise rental structures continued westward along Portage Avenue. The first evidence of "satellite" suburban high-rise development was also evident during this period, in the communities of St. Vital and Fort Garry.

The 1960s witnessed a continued expansion of high-rise construction extending from adjoining high-rise areas, and along major traffic thoroughfares. "Satellite areas" of high-rise rental construction established in the post-war era continued to attract new structures in existing and adjoining areas. These established high-rise areas continued to attract new construction during the 1970s and 1980s.

4.3 "OTHER" STRUCTURAL TYPES

Low-rise multiple unit structures comprise the vast majority of the rental market in many outer suburbs, and are prominently featured in several neighbourhoods immediately surrounding the CBD. This latter group is dominated by units built prior to 1921, as well as during the inter-war period.

The post-war period of 1945-1960 witnessed the continued proliferation of low-rise units in NCAs surrounding the CBD, and their location in suburban areas along major thoroughfares. The 1970s and 1980s marked the continuing decline of inner NCAs and the CBD as the site for "other" unit types and their expansion into suburban areas.

5.0 GENERALIZED SPATIAL SUB-MARKETS

This section defines generalized spatial sub-markets according to the levels of total rental market share, and structural sub-market share, commanded by particular NCAs.

The analysis of generalized spatial sub-markets was conducted in three steps:

1. For the total rental market, NCAs were mapped if 50.0% or more of their total dwelling units were rented, or if they contained at least 1.0% of the city's total rented occupied units, or if they satisfied both of these criteria.
2. For structural types, NCAs were mapped using two separate methods:
   For the categories of apartments five storeys or greater, and "other" unit types, NCAs were mapped if they contained a 1.0% or greater market share within the structural

category, or if 50.0% or greater of all an NCA's rented dwelling units were contained by structures within the category, or both.

For the category of single-detached units, NCAs were mapped if 20.0% or more of their single-detached units were rented, or if they contained 1.0% or more of the single-detached market, or if they satisfied both of these criteria.

3. The structural composition of generalized spatial sub-markets for the total rental market was analyzed by selecting those NCAs mapped in step one which contained both a 1.0% total market share and 50.0% or greater rental tenure of their total units. These selected NCAs were then mapped for their structural composition by the majority or minority of NCA market share held by high-rise or "other" unit types, and compared to those NCAs selected in step two for market share by structural type.

The analyses of market shares for structural types conducted under step two are not included in the executive summary, but are discussed in the text.

5.1 NCA MARKET SHARES: TOTAL RENTAL MARKET

A high concentration of general rental market activity occurs within and immediately surrounding the CBD, as well as in particular suburban areas. Variations in the proportion of rental tenure appear to be greater in suburban areas than in the CBD, but in some cases this may be partially due to the use of NCAs as a unit of analysis.

5.2 NCA MARKET SHARES: STRUCTURAL CONTENT

Of those NCAs selected in step one, apartment buildings five storeys or greater comprised the majority of the total number of rental units available in Winnipeg's Downtown and most qualifying suburban areas. "Other" structural types comprised most of the total rented units in those NCAs surrounding the Downtown area and in a minority of the qualifying suburbs. Only three NCAs were virtually dominated by either the "other" or high-rise structural category; one by high-rises to the immediate southwest of Downtown, and two by "other" types, one adjacent to the dominant high-rise area, and the other to the west of Downtown.

Where a structural type represented a majority share of the total rental market in step one NCAs, they also generally represented a greater than 1.0% share of the Winnipeg total for the corresponding structural sub-market defined in step two.

As a relative proportion of structural types within these selected NCAs, rented single-detached units did not figure highly. However, some of the selected NCAs with a market majority of "other" unit types did contain important shares of the city-wide market for rented single-detached units.

The dominant areas of single-detached rental activity occur immediately to the west and north of the CBD, with a dilution of market activity as one moves further westward and northward.

6.0 DISCUSSION OF POLICY IMPLICATIONS AND AREAS FOR FUTURE RESEARCH

The spatial distribution of Winnipeg's rental housing supply exhibits many elements of the classical theoretical models of urban land use. High-rise apartment buildings cluster around the Central Business District, and disappear as one leaves the downtown and enters the city's old residential neighbourhoods. These neighbourhoods are dominated by "other" structural types, particularly low-rise apartment buildings, and many rented single-detached and duplex or triplex units. Further outward from the downtown along major thoroughfares, "other" dwelling units continue to predominate, until major and medium-sized suburban shopping areas appear, where high-rise apartment buildings again dominate the rental market. Interspersed with "other" unit types, including rowhouses and townhouses, high-rise apartments have quickly expanded rental housing to suburban areas, beyond the traditional markets of the city centre.

Considerable work remains in exploring the impact of market forces on rental housing over time. Changes in interest rates, average rents, demographic indicators, and vacancy rates for example, may have different impacts for various structural and spatial sub-markets.

Further research is required in order to complete a comprehensive analysis of the total market, which should focus on the demand side of the market, and its interaction with the supply side over time.

Efforts should also be made to assess the long-term impact of demographic and macroeconomic indicators on the behaviour of urban market variables, such as construction starts, vacancy rates and tenure conversions.

6.1 "OTHER" STRUCTURAL TYPES

"Other" dwelling unit types comprise a continually decreasing proportion of newer unit construction, suggesting a gradual decrease in total market share. This begs the question of how long "other" types will remain dominant in the marketplace, and what impact an aging stock of "other" units will have on the supply of rental units for older areas of the city.

Further research is needed to confirm those neighbourhoods which have been affected by condominium conversions, and other processes which have effectively removed "other" unit types from the rental marketplace.

It may be more economical to construct new high-rise units to replace single-detached or "other" structural types, but it may be preferable to encourage single-detached tenure conversions and

discourage the condominium conversions of "other" units in order to preserve the architectural and social integrity of older neighbourhoods.

While the above considerations are of considerable research and policy interest, it is difficult to make further comments on "other" units until further details concerning townhouses, rowhouses, duplexes, triplexes and various low-rise apartment buildings are revealed in the 1991 census results.

6.2 APARTMENT BUILDINGS FIVE STOREYS OR GREATER

As a rapidly growing structural sub-market, further research could be conducted on the influence of long-term financial and demographic trends on the market for high-rise structures.

It may also be possible to identify unique characteristics among tenants of high-rise apartment units, especially in particular neighbourhoods.

Since many of these structures were built during the 1960s and 1970s, many will soon be in need of extensive renovations. If these units are allowed to deteriorate, an increased rate of tenant turnover may be created, as well as lower market rents.

6.3 SINGLE-DETACHED UNITS

Single-detached rental units have hardly been recognized as part of the rental market, and no vacancy or price information has been collected for these specific units by CMHC.

Factors which influence the transfer of single-detached units from the ownership market to the rental market remain unclear. If the shift to rental tenure in these units has been relatively recent, it may be related to the decline in low-rise apartment unit construction, or a lack of such units where demand is greatest. The shift from owner-occupancy to rental occupancy may also vary in its characteristics between "inner city" and suburban neighbourhoods.

A landlord questionnaire survey, perhaps distributed with the participation of the Manitoba Landlords Association, would provide further insight into the processes which result in the transfer of single-detached units from the ownership market to the rental market.

In addition to the paucity of knowledge concerning the suppliers of single-detached rental housing, virtually nothing is known about the residents of single-detached rental units, or how their characteristics may vary from one part of the city to another.

Rented single-detached units may provide a viable housing alternative for those consumers who desire the amenities of a single-detached environment, but perhaps cannot afford to carry a mortgage.

Rented single-detached units may also provide an alternative source of accommodation to groups of unrelated individuals, such as students or other low-income earners. Members of such households may share the benefits of greater household economy, and shelter affordability, than they

might otherwise have been able to obtain as single-person or two-person households renting in "other" or high-rise unit structures.

Further research on the demand side of the single-detached market may yield answers to these questions. If many of the tenant households in these units have low incomes, these units may signal a potential new area of concern for social housing policy.

1.0 INTRODUCTION

The purpose of this paper is to develop an accurate description of the Winnipeg rental stock, and to empirically verify the theoretical notion of housing sub-markets. The results of the research are expected to provide information for the development of housing policy, market decisions, and to suggest areas for future research on the dynamics and constraints of sub-market behaviour. The spatial distribution of Winnipeg's rental housing inventory is identified, and profiled according to the age and structural type of rented dwelling units. From these examinations, spatial sub-markets are also identified and analyzed. The spatial distribution of Winnipeg's rental housing market is then compared with the land use patterns of theoretical models, and the processes underlying these models are briefly explored. This latter discussion addresses aspects of market demand, and serves as a point of departure for potential areas of further research and policy development.

This introduction contains a theoretical discussion of housing markets, their definition and characteristics. Section 2.0 discusses the data sources readily available for the study of housing markets in Winnipeg, and section 3.0 explains the methodology used in this paper. Section 4.0 analyses and discusses the general characteristics of the Winnipeg rental stock, its structural and age composition, and its relation to the owner-occupied stock, in absolute and relative figures. Section 5.0 analyses and discusses the spatial distribution of Winnipeg's rental stock, in total as well as by age and structural type. Section 6.0 examines those spatial areas which contain large shares of the total market, their structural composition, and those areas which contain large market shares of each structural type. Section 7.0 discusses the theoretical context of the spatial analyses within urban land use theory. A discussion of these results, and their implications for future research, is found in Section 8.0.

1.1 CONCEPTUALIZING HOUSING MARKETS

In its most elementary economic definition, a housing market is the interaction between the demand for housing by consumers and the supply of housing by producers. In this narrow context, housing markets are described and measured as if supply and demand were uniform in nature, where all housing units were identical and all consumers of these units had an identical demand for them. In contrast with this generalized view, it may be argued that a monolithic, homogeneous supply of housing does not exist, and that a housing market is actually a combination of many individual markets for specific types of housing.

The most important basis for the latter argument is that unlike most other market goods, each unit of housing has a unique fixed location. This intrinsic locational quality of housing supply directly

affects the nature of housing demand, and by extension, the behaviour of the market. The demand for housing is not simply a demand for shelter, but also includes a demand for the location of that shelter.

Given the intrinsically unique location for every unit of housing supply, it could be argued that every one of these units responds to a unique spectrum of consumer demand. An entire metropolitan housing market would consist of the total aggregate of these unique micro-economic markets for individual properties. This notion of aggregated micro-markets represents the extreme opposite of the homogeneous, monolithic market concept. Both of these dichotomous extremes are problematic, however, in that they contrast each other's weakness at the peril of ignoring each other's strength. The homogeneous approach ignores important locational variations within the metropolitan market, while the reductionist approach ignores the ease of market substitution between different types of housing products among individual consumers. In each case, the source of difficulty in defining markets is the locational fixity of housing supply.

Housing economists and market players usually acknowledge the locational quality of housing markets to a moderate extent, and at varying levels of spatial aggregation. For example, inter-city comparisons are often made on metropolitan averages of vacancy and price, while intra-city comparisons are usually made between communities or neighbourhoods. In both cases, it is the location of housing supply which is used as the basis for measuring and comparing the behaviour of housing markets.

The association of particular housing unit characteristics with individual neighbourhoods or districts also encourages the use of spatial areas as a basis for comparing markets. Social variables associated with market demand, such as household income and family status, may also emphasize the spatial differentiation of housing markets within the city. However, variables of housing demand are much more likely to change spatially over time than the characteristics of housing supply. The major source of this difference is the locational fixity of housing supply and the mobility of housing demand.

Given this difference between the relatively mobile nature of housing demand and the relatively fixed nature of supply, most market comparisons continue to be based on the location and characteristics of housing supply. It may therefore be said that while housing supply should not be equated with a housing market, the location of housing supply is most often used to identify a housing market. It is for this reason this paper focuses on the characteristics of housing supply, particularly its location, within the context of housing markets in general and rental housing markets in particular.

1.1.1 Rental Housing

Rental housing may be defined as those housing units which are occupied by households who do not own the unit and exchange rent for that occupancy. Rental accommodation is an important component of the total housing market in any major city, and the rental vacancy rate is commonly used as a measure of housing demand in urban areas. Vacancies, rents, construction starts and other indicators are also used to describe the general behaviour of an urban rental market. This behaviour is produced by the interaction between the demand for rental accommodation by consumers, and the supply of that accommodation by rental property owners.

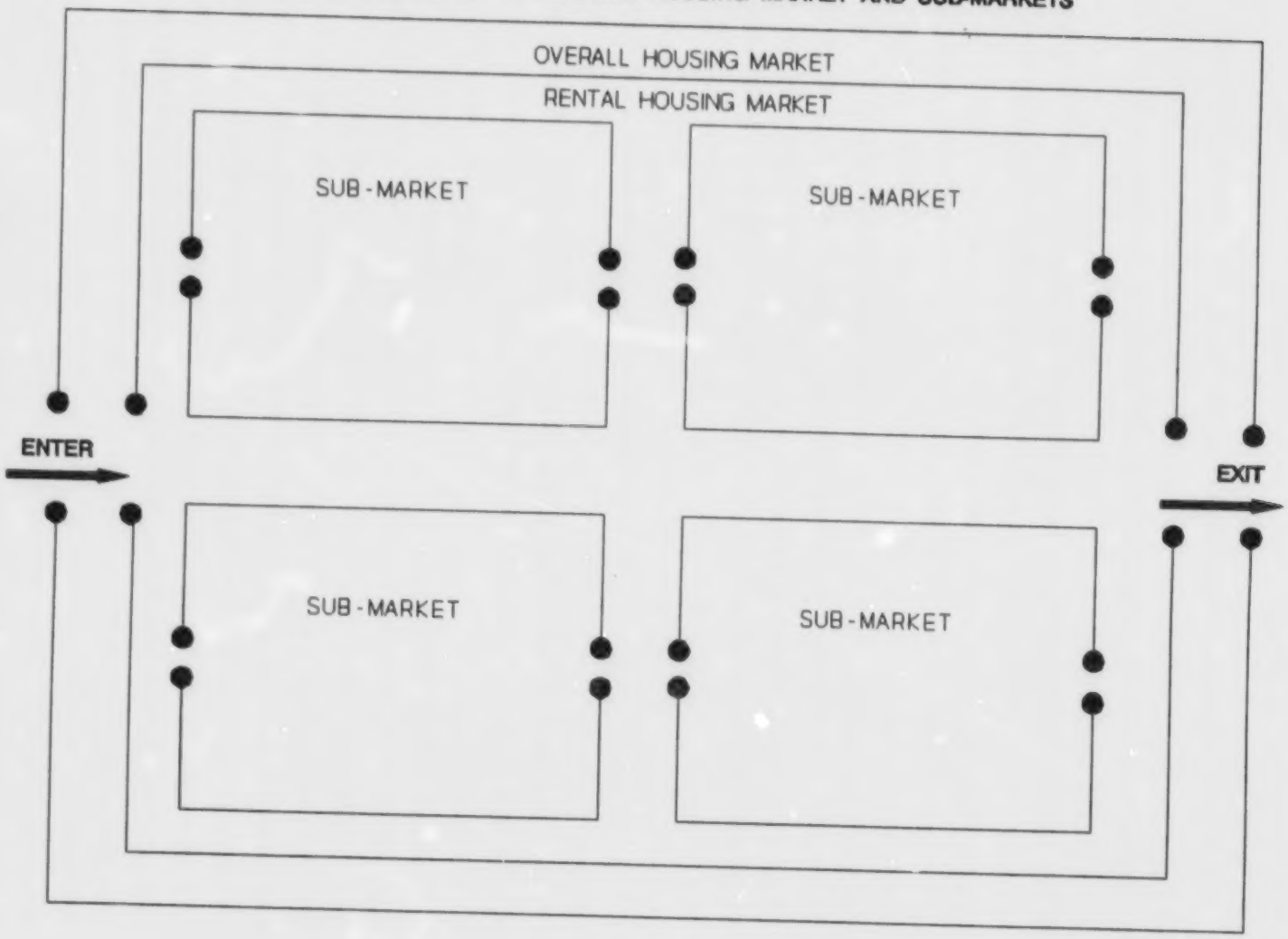
Like the overall demand for housing in general, the form of housing tenure is relatively mobile compared with the locational fixity of housing supply characteristics. However, the degree of this tenure mobility may vary considerably from one unit to another and over time. For example, the tenure of a particular housing unit may shift between owner occupancy and rental occupancy a number of times during its history, while other housing units remain owner-occupied (or rental-occupied) for their entire history. The proportion of rental tenure for an urban housing market may also vary considerably over time, location, and by dwelling unit characteristics such as structural type and period of construction.

Furthermore, while housing demand exhibits greater spatial mobility than housing supply, the demand for rental units is more mobile than the demand for owner-occupied units. Reflected by the preference for short-term leases, renting households are much more likely to change location, and substitute housing products, than owner-occupying households.

1.1.2 A Nested Market Model

Variations within the rental market and its relation to the housing market as a whole may be understood through a model of nested markets. Devised as a series of open systems (Bertalanffy, 1968), each component of the nested model represents a segment of the total shelter market, defined by pre-determined variables. A schematic representation of the nested open market model is contained in **Figure 1**. In this model, each open market is represented as a boundary, or box, with exit and entry points represented by pairs of dots. The outer-most boundary delineates the entire marketplace for housing, which individual consumers may enter or exit with changes in economic status, stages in life, or for other reasons. Within this outer layer are smaller open markets representing ownership and rental markets. In order to preserve the simplicity of the diagram, the ownership market is not represented in **Figure 1**. The ownership and rental markets in turn contain open sub-markets, which may be defined according specific attributes of the dwelling units, their location, or attributes of the

FIGURE 1 - WINNIPEG RENTAL HOUSING MARKET 1988:
SCHEMATIC DIAGRAM OF THE RENTAL HOUSING MARKET AND SUB-MARKETS



consumers who demand them. These criteria may vary, or be combined, depending on the purpose of the research. As described above, individual housing units may move from one market to another over time, as the nature of tenure changes. The flexibility of the open market model accommodates the needs of researchers by allowing the creation of a rigorous taxonomy, while also considering the dynamics of behaviour.

1.2 SUB-MARKET DEFINITION AND CONSUMER SUBSTITUTION

As open systems defined by specific supply or demand characteristics, sub-markets are relatively self-contained, such that consumers may most easily substitute between sub-market products, but may also enter or exit the sub-market at will. For example, a renting household which moves from a one-bedroom unit in one low-rise building to a different one-bedroom unit in another low-rise building would be substituting within the one-bedroom low-rise sub-market, defined according to these supply characteristics. A renting household that moves from an apartment to a single-detached house would be substituting between two sub-markets defined by structural type. In both of these cases, the sub-market boundaries are defined according to specific attributes of the rental market supply, but as suggested earlier, sub-markets may also be defined by characteristics of consumer demand. For example, a sub-market may be defined by the monthly rent households are able to afford, regardless of the structural types which these households occupy.

Demand-side sub-markets may also be defined according to household characteristics such as family status. The key feature of the open sub-market model is that researchers may define sub-markets according to supply or demand characteristics. Sub-markets may also be defined within the model according to measures of demand/supply interaction, such as unit price, vacancy rate, or in special cases such as seniors' housing and co-operatives, the length of consumer waiting lists.

Bourne (1981) highlights product substitution in defining sub-markets, but also stresses the importance of the interaction of supply and demand in the marketplace in producing sub-markets. In his approach, specific attributes of housing supply, such as the period of construction or structural type, are less important than collective market behaviour in defining sub-markets. For Bourne, sub-markets are "homogeneous clusters of housing types or household characteristics in which there is a unique set of prices (or rents) and between which there is little substitution of one product for another" (Bourne, 1981, pp. 86-87).

Although he emphasized the behaviour of markets, Bourne still distinguished between sub-markets based on attributes of supply ("housing types"), and attributes of demand ("household characteristics") criteria. These distinctions were also evident in the reasons Bourne suggests for the

creation of sub-markets: "(1) through the sheer *size* and *heterogeneity* of the housing stock; (2) through the *diversity* of demands placed on placed on that stock by households; and (3) because of barriers or *disequilibria* in the market itself" (original italics; Bourne, p. 87).

Although sub-markets ought to be readily identifiable by their behaviour, it is virtually impossible to identify these qualities of diversity, heterogeneity and disequilibria by market behaviour alone. While sub-markets are clearly the product of interaction between demand and supply, the characteristics of these two components must be defined before sub-market behaviour can be measured.

1.3 SPATIAL SUB-MARKETS

In addition to defining sub-markets according to substantive criteria such as household status, dwelling unit size, or rental charges, it is also possible to define sub-markets according to locational criteria. The major theoretical question is the extent to which substantively defined housing sub-markets correspond to spatially defined sub-markets. In other words, to what degree can substantively defined sub-markets be identified according to their spatial distribution, or inversely, is it possible to identify substantive sub-markets based on spatial patterns? As in the case of substantively defined sub-markets, the major problem in defining spatial sub-markets is deciding which variables to choose, but an additional consideration is the spatial unit of analysis.

Based on a review of literature, Bourne (1981) discovered a wide range of thought in the discussion of spatial sub-markets, and defined four approaches to their definition: taxonomic, substitutive, market cross-linkages and areal price comparisons. He suggested that while spatial sub-markets exist, their significance to the behaviour of general housing markets, consumer choice and prices has not yet been established. To address the significance of sub-markets to market behaviour, Bourne felt that researchers should try to "focus on those specific constraints in the housing market which one would not expect to appear uniformly across the urban area" (Bourne, 1981, p. 91).

Bourne's list of constraints included variables from both the demand side of the housing market (the varying attraction of neighbourhoods, differential access to market information, forms of social discrimination), and the supply side of the housing market (the accessibility of particular locations, the limited availability of housing types). He also described institutional restrictions affecting both the supply and demand for housing (Bourne, 1981, p. 91). Focusing research on these constraints does, however, pose an important methodological problem, since it is often impossible to directly relate data for demand-related variables to data collected for supply-related variables. This problem is partly technical, rooted in the purposes and diversity of data collecting and data availability, but it also

underlines the fundamental condition of housing markets that demand has much greater spatial mobility than supply.

Bourne also suggested that describing geographic areas based on the study of market constraints as "sub-markets" should be questioned "until the actual market implications of these differentials are assessed," and in the meantime, that such areas should be labelled "as 'market areas' or housing 'regions'" (Bourne, 1981, p. 92). While the fundamental importance of market processes is recognized in this paper, we are primarily interested in the specific attributes of rental housing supply by which spatial sub-markets may be differentiated, particularly the structural type, period of construction, and degree of rental tenure. By identifying spatial concentrations of these variables, both relatively and absolutely, market implications may be more readily recognized.

In this paper, the term "spatial sub-market" is used in a purely taxonomic sense, to describe spatial concentrations of rental market activity, and to distinguish them theoretically from spatial, open sub-systems of the rental market, which are defined according to substantive criteria. To maintain consistency within the open-system model, sub-markets defined by these aspatial criteria will be termed "structural sub-markets." For example, the demand and supply of high-rise apartment units throughout a city will be considered a structural sub-market, but a large concentration of these housing units in a particular neighbourhood will be considered a spatial sub-market. The taxonomic use of the term sub-market in this paper should therefore not be seen as contradictory, but as complementary to Bourne's discussion.

1.4 SPATIAL SUB-MARKETS AND MODELS OF URBAN LAND USE

The aggregation of both spatial and structural rental sub-markets represents a metropolitan pattern of rental housing land use, a pattern which may be expected to vary from one metropolitan area to another. Classical models of urban land use proposed by Burgess (1925) and Hoyt (1939), as well as functional models by Alonso (1960) and others, have suggested that rental housing can be expected to locate in certain areas of the city. The extent to which these generalized models and their underlying assumptions represent urban land use patterns and processes remains a matter of scholarly debate, particularly among urban social theorists such as Chorney (1990), Tabb and Sawers (1984), and Smith (1979). While a full treatment of this debate is beyond the scope of this paper, the current research presents an opportunity to test the generalizations of the classical models, and some of their more recent modifications, against the Winnipeg rental market experience.

2.0 DATA SOURCES

This section discusses the data sources available within the rental market research area, and their applicability to the current work. Like other types of housing data, rental market data are primarily available from two major sources: Statistics Canada, and the Canada Mortgage and Housing Corporation (CMHC). The data sets from each of these two sources are characterized by a number of strengths and weaknesses, because each organization collects information for different purposes. Each data set provides valuable insight into specific problems, but neither provides a fully comprehensive description of the rental market. Directly combining the two sources of information is virtually impossible because of differences in their taxonomy, level of spatial aggregation and sampling frequency. For these reasons, only indirect comparisons may be made between the two data sets.

2.1 STATISTICS CANADA AND CMHC DATA COMPARED

In describing housing and other variables, Statistics Canada uses two units of analysis at the urban level: Census Metropolitan Areas (CMAs) and Census Tracts (CTs). Although CMAs are useful for comparing data from different cities, CTs are most frequently used to examine spatial variations within cities. CMHC also uses data at the metropolitan level for making inter-city comparisons, but for intra-city analyses, it uses arbitrarily defined zones to compare, for example, central city and suburban areas. In Winnipeg, these zones closely correspond to the Community Committee Areas used by the local government. These large unit areas are not well suited to spatial analyses, but are used to provide valuable housing market information. CTs created by Statistics Canada are better suited for spatial study, but like CMHC's zones, have somewhat arbitrary boundaries.

Statistics Canada acquires census data from the Canadian population every five years. Residential dwelling units are the basis for census-taking in Canada, with each occupied unit being assigned as a census household. All households in Canada with an address receive a census form, but every fifth household surveyed receives a longer census form with additional questions concerning a wider array of information. In order for the totals of 20.0% sample questions to equal the total number of households sampled in the census for a given census area, the 20.0% sample responses are "factored up," according to their proportion. For example, the structural type of dwelling unit is a 100.0% census question, but the period of construction is a 20.0% question. This means that when the census forms are gathered for a given census area such as a CT or CMA, only 20.0% of the total number of dwellings are described by their period of construction. Each period of construction comprises a fixed proportion of the 20.0% sample, and this proportion is assumed to apply to the

remainder of the dwellings for a given census area. Census area totals are therefore multiplied, or "factored up," by the fixed proportion for each 20.0% response in order to obtain figures which equal the 100.0% response total. So, if 10.0% of the 20.0% sample respondents lived in dwelling units which were constructed during 1961-1970, the total number of dwelling units established by the 100.0% sample would be multiplied by 10.0% to obtain a 1961-1970 construction period figure for the total dwelling units in the entire census area.

CMHC conducts surveys of Winnipeg rental market variables on a continuing basis, and publishes its results every six months. CMHC surveys attempt to provide a 100.0% sample, but because of unwilling respondents, typically produce a sampling rate 85.0% or greater.

Given these differences between the two major sources of data, each has significant advantages and disadvantages. CMHC data are well-suited to temporal analyses for urban areas, but do not adapt well to spatial analysis except at the most rudimentary level. Statistics Canada's census tracts are small enough to conduct excellent spatial analyses, but the long periods between census samples pose problems for longitudinal studies. Problems are also raised for temporal analyses by changes in census tract boundaries, which are made to accommodate changes in population.

Statistics Canada and CMHC data sets also differ in the number and variety of variables which are sampled. CMHC is primarily concerned with vacancy rates, new units under construction, starts, completions, and variable differences between privately and publicly developed units. These variables are described within a highly consistent taxonomy from one sampling period to another, with clear distinctions made between the number of bedrooms per unit, and two structural types: self-contained apartments and row or townhouses.

Statistics Canada did not distinguish between publicly and privately owned housing in its 1986 census data, and used a slightly different taxonomy in describing structural types. Where CMHC differentiates between row or townhouse units and apartment units, and sub-divides apartment structures by the number of units per building, 1986 Statistics Canada data disaggregated the number of units according to each structural type, which included single-detached apartment buildings of five storeys or more, and moveable dwellings, with the remainder of structural types classified as "other." This last category included townhouses and row housing units, and apartment buildings less than five storeys.

The implications of these differences in variable selection, sampling frequency and taxonomy are found in the corresponding levels of descriptive detail that each data source provides. For example, CMHC provides no information on the rental of single-detached units, an important sector within the Winnipeg residential rental market, while Statistics Canada's 1986 data does not distinguish between

low-rise apartment buildings and row or townhouses—structural types which may be defined as distinct sub-markets of rental housing.

In sum, both CMHC and Statistics Canada data have important spatial, temporal and taxonomic limitations which make it very difficult to answer many basic descriptive questions about rental housing markets. The limitations of available data make it impossible to answer research questions requiring the creation of different taxonomies. The research presented here on the Winnipeg rental market must therefore be considered within the context of these general limitations.

2.2 SPC/IUS SPECIAL TABULATIONS

An additional data source available for investigating the Winnipeg market is a set of specially created cross-tabulations of 1986 census data. This set was purchased by a consortium of users, spearheaded by the Social Planning Council of Winnipeg, with the participation of the Institute of Urban Studies. The cross-tabulations were calculated according to small spatial divisions of the City of Winnipeg created by its Planning Department, called Neighbourhood Characterization Areas (NCAs), or as they are also sometimes called, Neighbourhood Planning Areas (NPAs). They have also been referred to as Plan Winnipeg Policy Areas, after the comprehensive land use plan for which they were created. These units have a number of advantages over census tracts for research within Winnipeg. First, their boundaries have been created according to the general periods of housing construction. Secondly, NCA boundaries have attempted to segregate land uses on a broad scale. For example, major industrial facilities such as railway yards have been separated from residential neighbourhoods to better represent the size and character of populated areas. Thirdly, the cross-tabulations also had the unique advantage of being readily available in ASCII digital format as well as being printed on paper, making them immediately available for analysis using a computer. Finally, the large number of cross-tabulations effectively created a new range of specialized, direct variables for study. Because of these advantages the 1986 cross-tabulation data was chosen for the research.

3.0 METHODOLOGY

As explained in 1.0, it is possible, at least in theory, to discuss any variety of rental sub-markets according to one's preferred criteria. In empirical work, the study of rental sub-markets is restricted by the definition and availability of data. Given the data set selected for this paper, and the rental market taxonomy it contained, the cross-tabulation of "occupied private dwellings showing structural type by period of construction by tenure" was chosen for analysis (Social Planning Council of Winnipeg/Institute of Urban Studies, 1988). Rental sub-markets were defined temporally by the census year 1986, spatially by the City of Winnipeg NCAs, and substantively by the three variables of structural type, tenure and period of construction.

3.1 DEFINING VARIABLES AND OBSERVATIONS

Within the cross-tabulation, these variables were further sub-divided into the following categories:

STRUCTURAL TYPE:	single-detached apartment buildings five storeys or greater moveable dwellings other
TENURE:	rented owned total
PERIOD OF CONSTRUCTION:	1920 or earlier 1921-1945 1946-1960 1961-1970 1971-1980 1981-1986

In this data set, the *dwelling unit* is the unit of analysis, and is defined as a self-contained living accommodation for an individual census household. A dwelling unit may be an individual apartment within a larger building such as an apartment block or converted house, but it may also be a single-detached house, a rowhouse or townhouse unit, or contained by some other *structural type*. In this study, dwelling units are not distinguished by their number of rooms or amenities, and are only distinguished by structural type where specified. For calculation and comparison purposes, dwelling units are considered to be equivalent regardless of the structures in which they are contained. A structural type may also be referred to in the text as a *structural unit*. For example, an NCA may contain a ten apartment buildings of five storeys or greater, and therefore contain ten structural units of this type.

Values for movable dwellings were excluded from the analysis, because only 120 were recorded within City of Winnipeg boundaries. It should also be noted that values for the structural period 1981-1986 included those units for which construction was completed between January 1, 1981 and May 31, 1986. This tabulation combined information gathered at both the 100.0% sampling level (structural type, tenure) and 20.0% sampling level (period of construction). In order to create a valid table, the raw data for structural type and tenure were redefined according to the 20.0% sample for period of construction, prior to the calculation of the cross-tabulation. The resulting cell totals were then treated as statistical weights, and were used to estimate the totals of each cell as if a 100.0% sample were taken for all three variables. The raw data contained in the cross-tabulation cells were not actual totals, but weighted estimates for the entire population. These estimates were separately calculated for each NCA in the City of Winnipeg, as well as for the City as a whole, and provided the raw data on the basis of which further analyses were performed.

The analysis of the data set was performed in three major steps. First, data for the entire Winnipeg market were analyzed aspatially, according to city-wide, absolute and relative measures of rental tenure, structural type and period of construction. The second step was the spatial analysis of rental tenure, by period of construction, as well as the spatial analysis of rented dwelling units, by structural type and by period of construction. The third step was the definition of generalized spatial sub-markets by NCAs which commanded large market shares of total metropolitan rental tenure, total metropolitan structural tenure, and a comparative analysis of the structural composition of NCAs with large shares of the total rental market.

3.2 DEFINING RENTAL MARKET AREAS

Although it is typical for individuals and organizations to refer to a "Winnipeg Rental Market," rented dwellings and occupied dwellings in general are unevenly distributed throughout the City of Winnipeg. It was therefore necessary to refine the definition of the spatial extent of the Winnipeg rental market as a first step in its analysis. Map 1 displays the jurisdiction of the City of Winnipeg, subdivided into NCAs, with each NCA indicated by a three-digit numeric label. A double cross-index of these numeric labels and their corresponding NCA names is found in Appendix A.

3.3 PLANNING AREAS BEYOND THE URBAN LIMIT LINE

The definition of rental market areas in Winnipeg began with the elimination of those NCAs located beyond the City of Winnipeg's Urban Limit Line (ULL). Aligned with a series of NCA boundaries, the ULL was created under Plan Winnipeg (1981) to restrict the expansion of suburban

development. **Map 2** shows the jurisdiction of the City of Winnipeg sub-divided into its NCAs, and highlights those NCAs which are located beyond the ULL. There is little residential development in these areas, and with the exception of NCAs containing the original centre of Headingley, most residential dwellings are confined to "large lot" holdings. Data for all of these NCAs were excluded from further analysis in order to avoid proportional exaggerations in the data and distortions on subsequent maps. The NCAs themselves were also removed from subsequent maps in order to enlarge the map of remaining areas.

3.4 NON-RESIDENTIAL PLANNING AREAS

Map 3 indicates those remaining NCAs bounded by the ULL. The shading scheme in **Map 3** indicates those NCAs which contain predominantly non-residential land uses. Such land uses include industrial areas (2.21, 3.29, 5.38, 6.55, *etc.*), large transportation terminals such as the Symington Yards (5.40) railroad facility and the Winnipeg International Airport (2.19), and the Fort Garry campus of the University of Manitoba (6.56). Although these NCAs occasionally contain scattered or tiny pockets of residential land use, fewer than 100 occupied dwelling units occur in most of these areas according to the data.

Within the remaining industrial areas, those few occupied dwellings presented another special case for the analysis. Although none of the industrial NCAs contained more than 100 of these housing units, many of these units were rented to their occupants. Prominent among these areas were Logan CPR (1.01), Inkster Industrial (3.29), and Dufferin Industrial (3.28), where 23.0%, 100.0% and 38.0% of the dwellings were rented, respectively. Logan CPR also presented a highly unusual case in that it was specifically targeted by Winnipeg's Core Area Initiative for significant physical improvements in the housing stock. It is very difficult to estimate the exact impact of these improvements on the census data for this neighbourhood.

The small St. Boniface neighbourhoods of Holden (5.09) and Tissot (5.03) were also somewhat unique with respect to their proximity to industrial land uses. Holden is virtually surrounded by industrial activity, but has maintained a small concentration of residential housing, where 41.0% of the 85 occupied units were rented. Tissot is surrounded by non-residential land uses to the west, south and east, but none of its 50 occupied dwellings were rented. Other industrial areas containing a small number of residential units included St. Boniface Refinery (5.38), South Point Douglas (1.23) and Chevrier (6.53).

These and all other predominantly non-residential NCAs were excluded from spatial analysis, but were retained in subsequent mapping to provide a sense of the spatial continuity of the City's

spatial jurisdiction. All of the remaining NCAs featured predominantly residential or a combination of residential and commercial land uses, and were retained for the spatial analysis and mapping.

4.0 GENERAL MARKET CHARACTERISTICS IN WINNIPEG

This section describes the general characteristics of the rental housing supply for Winnipeg as a whole, emphasizing the absolute and relative degree of rental tenure according to structural type and period of construction. The research results are described in the text, and are presented in a series of graphs. The data set from which the graphs were created has been reproduced in table format in Appendix B. No observations or spatial areas were excluded from this general analysis of the rental market.

4.1 ALL STRUCTURAL TYPES

Figures 2 and 3 indicate the absolute and relative proportions of rental tenure among all of Winnipeg's housing units, according to their period of construction. These graphs provide a general picture of the Winnipeg housing market, its historical development, and the total market share of the rental sector. **Figure 2** shows the absolute proportion of housing units built during each construction period, defined separately for rented, owned and total tenure. The cross-hatched bars represent the total tenure for all housing units, indicating that *of all dwellings occupied in 1986, most were built during the three post-war periods of 1946-1960, 1961-1970 and 1971-1980. Of all dwelling units which were rented in 1986, most were built during the 1960s (23.77%) and the 1970s (33.87%). Except for this twenty-year construction span between 1961 and 1981, the proportion of 1986 rented units was always slightly less than the proportion of total occupied units.* This exception suggests that a dramatic increase in rental unit construction took place in anticipation of baby-boom consumers entering the rental housing market. One important assumption which applies here is that most of the 1986 rented dwelling units were originally built as products intended for rental consumption. This assumption is addressed later in the discussion of **Figure 5**.

The concentration of rental units built within the 1961-1981 twenty-year span is confirmed in **Figure 3**, which indicates the proportion of units rented or owned in 1986 for each given period of construction. *Of all occupied dwelling units constructed during the 1960s, 49.36% were rented in 1986, while 51.70% of all dwelling units built during the 1970s were rented in 1986.*

Figures 4 and 5 respectively indicate the absolute and relative proportions of structural types by period of construction for housing units rented in 1986. **Figure 4** may be interpreted in the same fashion as **Figure 2**, in that the absolute proportion of each rented structural type may be compared for each construction period. For example, *most of Winnipeg's rented single-detached units were built during the inter-war and immediate postwar periods, while nearly half of the structural units five storeys or greater were built during the 1970s.* All other structural types are characterized by

increasing absolute proportions with each construction period, except for the most recent period of 1981-1986, when very little construction occurred. The various structural types which comprise the total rental stock in Winnipeg are clearly different in age distribution. *Households renting single-detached houses will most likely reside in an older dwelling unit, while high-rise dwellers may expect much newer construction. Those renting dwelling units in other structural types may expect to find structural units built during all periods of construction.*

Figure 5 illustrates the relative proportion of period-built units defined by each structural type rented in 1986, and confirms some of the trends identified in **Figure 4**. For example, it *shows the increasing importance of apartment buildings five storeys or greater in those construction periods since 1945, the relative importance of older construction to the single-detached structural sub-market, and the extensive but declining importance of other structural types through each construction period.*

4.2 SINGLE-DETACHED UNITS

Single-detached units represented 12.75% of the total rental market in 1986, but while this share is small, it contains a number of interesting features, as illustrated in **Figures 6 and 7**. **Figure 6** indicates variations in the absolute proportion of owned, rented and total tenure for single-detached units by period of construction. First, *the vast majority of rented single-detached units were built in the inter-war (1921-1945) and immediate post-war (1946-1960) periods, suggesting the importance of older neighbourhoods as a market location.* Second, as one traces back through the three periods spanning the twenty-five years from 1986 to 1961, the proportion of owned dwelling units correlates closely with the varying proportion of total units constructed, but the proportion of rented units increases during each of the three construction periods. Finally, *the predominance of the inter-war construction period of 1921-1945 suggests an unusually high ratio of rental to ownership status for single-detached units built during this time.* This is confirmed by **Figure 7**, which indicates a nearly 50.0% greater rental tenure among units for this period than for either the previous or following period. *While the proportion of rental tenure was 9.92% for pre-1921 built units and 9.62% for 1946-1960 single-detached construction, 15.32% of Winnipeg's inter-war units were rented in 1986. This fact again suggests the importance of particular neighbourhoods where concentrations of these units occur.*

4.3 APARTMENT BUILDINGS FIVE STOREYS OR GREATER

Apartment buildings five storeys or greater, often referred to as high-rise structures, dominate the recent construction of rental units and represent 30.52% of the total rental market. The large number of units contained in these structures and their sheer size can radically change both the tenure

and architectural character of a neighbourhood. The position of these units within Winnipeg's overall rental market is described in Figures 8 and 9. Each bar in Figure 8 represents the proportion of 1986 tenured units in apartment buildings five storeys or greater according to the period in which these buildings were constructed. *Most high-rise structures in Winnipeg were built between 1961 and 1980,* and as indicated previously in Figure 5, high-rise units continued to be an important segment of rental market construction in the early 1980s. However, it should be noted that *high-rise dwelling units built before 1970 comprise a higher proportion of the 1986 ownership market than for the 1986 rental market.* Another noteworthy fact is that the proportion of owner-occupied units for construction periods prior to 1970 is higher than the proportions of rental units for the same periods. For the periods after 1970, the trend is reversed such that the proportions of rented high-rise units for these later periods are higher than the proportions for owner-occupied units.

This suggests that *market preferences in construction periods for condominiums vary considerably from one period to another. This hypothesis is also raised by* Figure 9, *which indicates an above average proportion of ownership of high-rise dwelling units built in 1945 or earlier, and a below average proportion of ownership among units built during the early 1980s.* Given these results, it is quite plausible to suggest that the boom in condominium ownership during the early 1980s rested considerably on the conversion of previously rented units.

4.4 OTHER STRUCTURAL TYPES

"Other structural types" include units found in apartment buildings less than five storeys, rowhouses, and townhouses. *This group comprises the remainder of the Winnipeg rental market, and represents the largest rental sub-market defined by structural type (56.67%). Although these units decline in their relative importance by period of construction, they represent the largest increase in total rental stock for each period.* Figure 10 indicates the absolute number of "other" dwelling units built during each period according to their tenure in 1986. *The 1970s showed a remarkable increase in the construction of these units, but there is also an unusually higher tendency for ownership of units built during this period.* This tendency is confirmed in Figure 11, which indicates that *49.22% of all 1986 owned "other" units were built during 1971 to 1980.* It is not possible to tell from the data whether this degree of condominium activity originated with the construction of the units, or resulted from a conversion of former rental units, or both. It is also interesting to note from this graph that *the proportion of 1986 rental tenure generally exceeds the proportion of ownership tenure for each construction period, except for units built during the 1970s, and those built in 1920 or earlier.* This latter fact suggests a relatively higher rate of condominium conversion may have occurred among these

FIGURE 2 - WINNIPEG RENTAL HOUSING MARKET 1986:
COMPARED PROPORTIONS OF TOTAL, OWNED, AND RENTED UNITS
BY PERIOD OF CONSTRUCTION

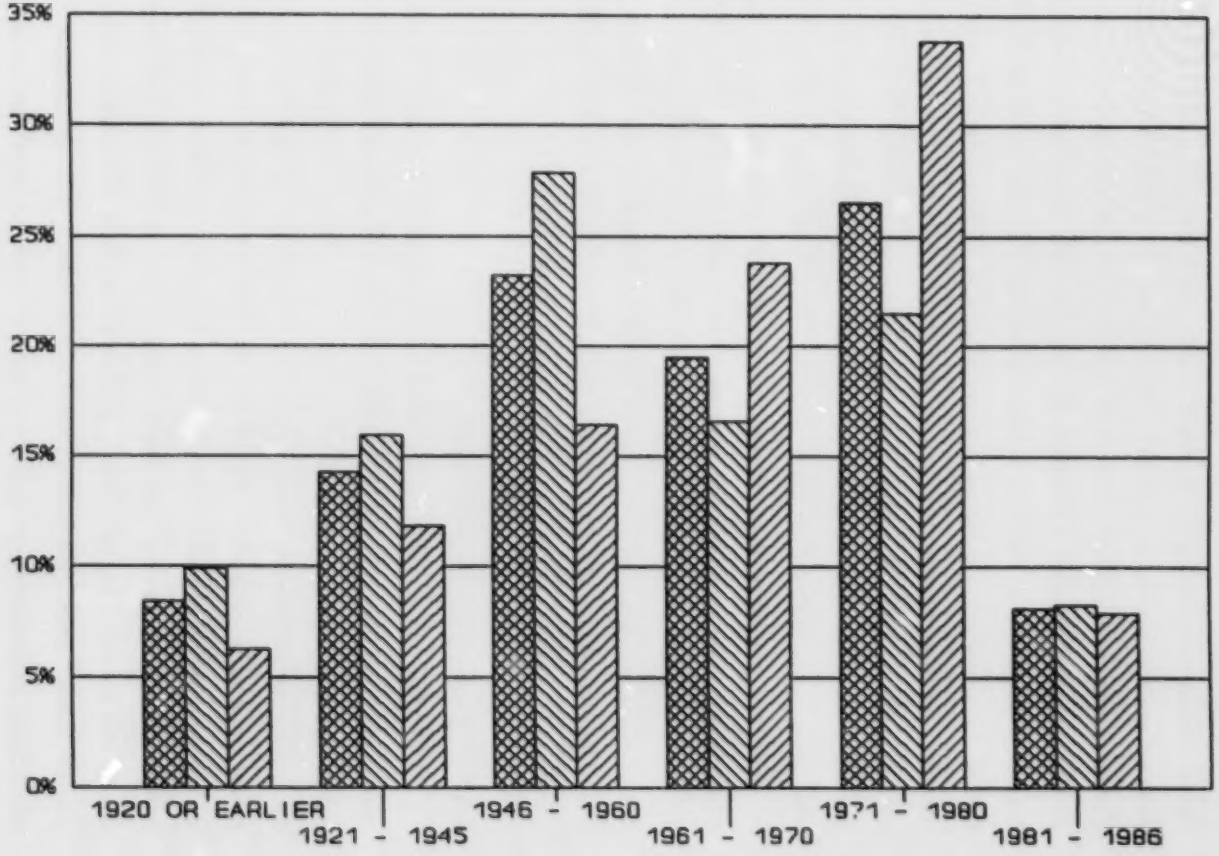


FIGURE 3 - WINNIPEG RENTAL HOUSING MARKET 1986:
RELATIVE PROPORTIONS OF OWNED AND RENTED TENURE FOR ALL UNIT TYPES,
BY PERIOD OF CONSTRUCTION

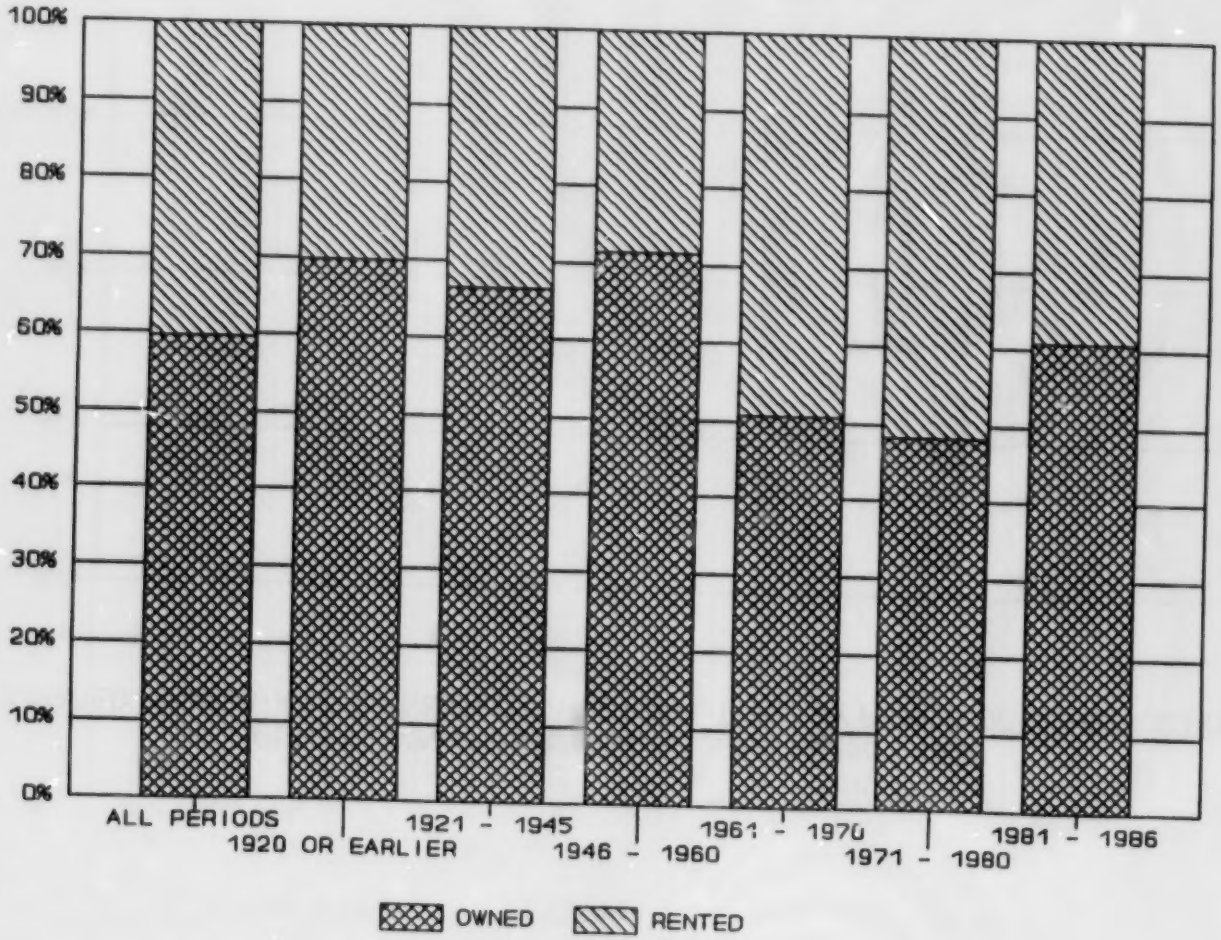


FIGURE 4 - WINNIPEG RENTAL HOUSING MARKET 1986:
COMPARED PROPORTIONS OF RENTED STRUCTURAL TYPES BY PERIOD OF CONSTRUCTION

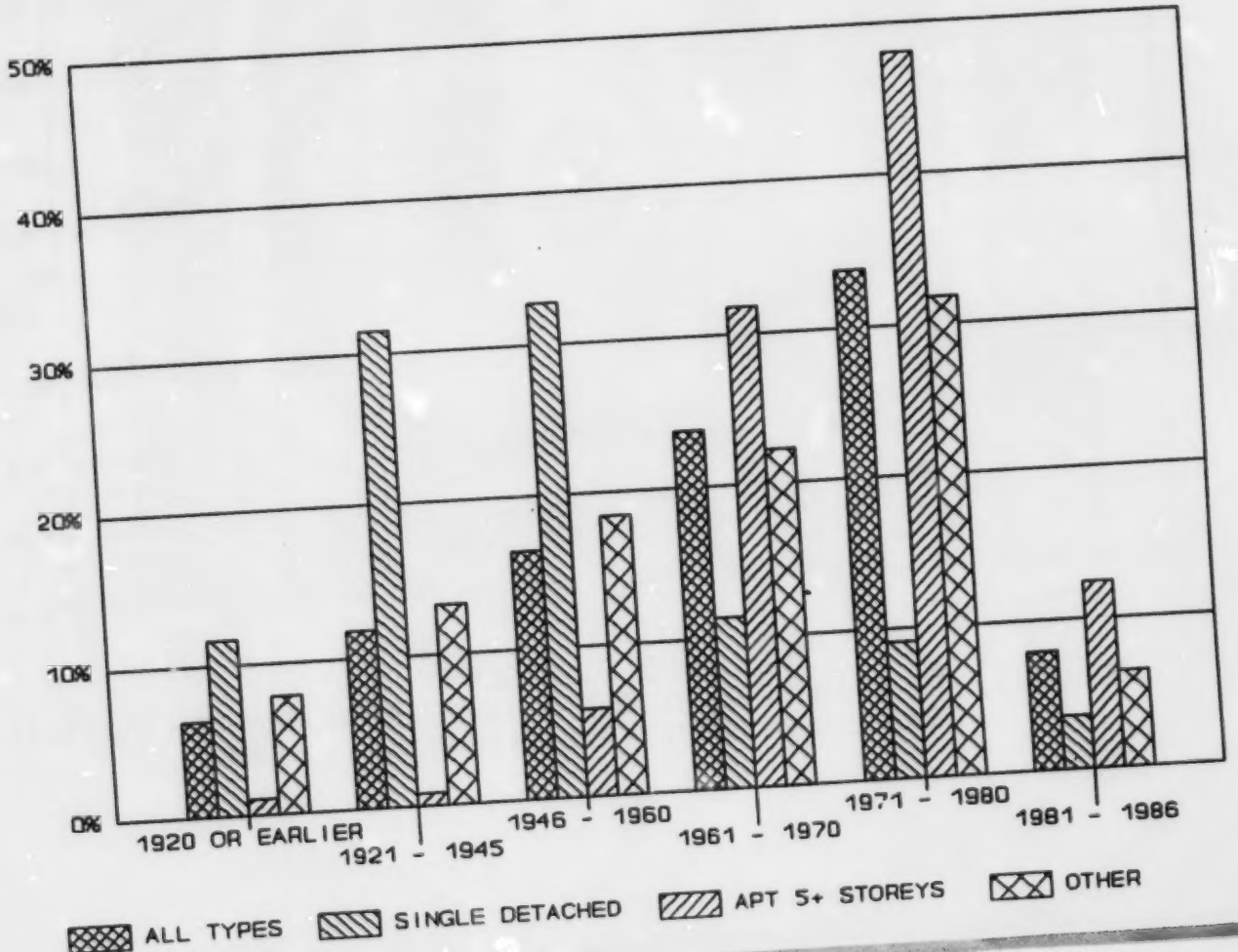


FIGURE 5 - WINNIPEG RENTAL HOUSING MARKET 1986:
RELATIVE PROPORTIONS OF RENTED STRUCTURAL TYPES BY PERIOD OF CONSTRUCTION

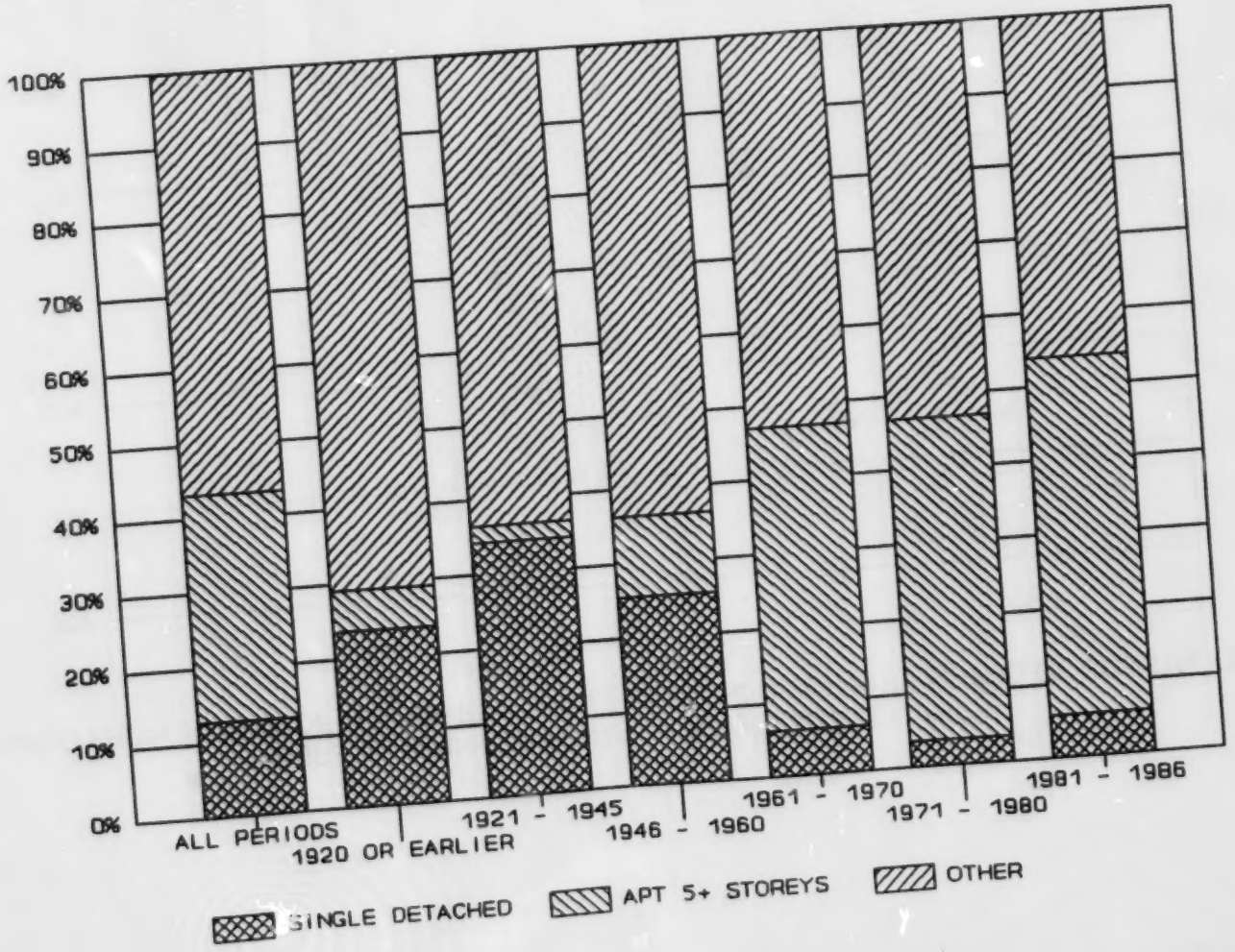


FIGURE 6 - WINNIPEG RENTAL HOUSING MARKET 1986:
COMPARED PROPORTIONS OF TENURE FOR SINGLE DETACHED UNITS, BY PERIOD OF CONSTRUCTION

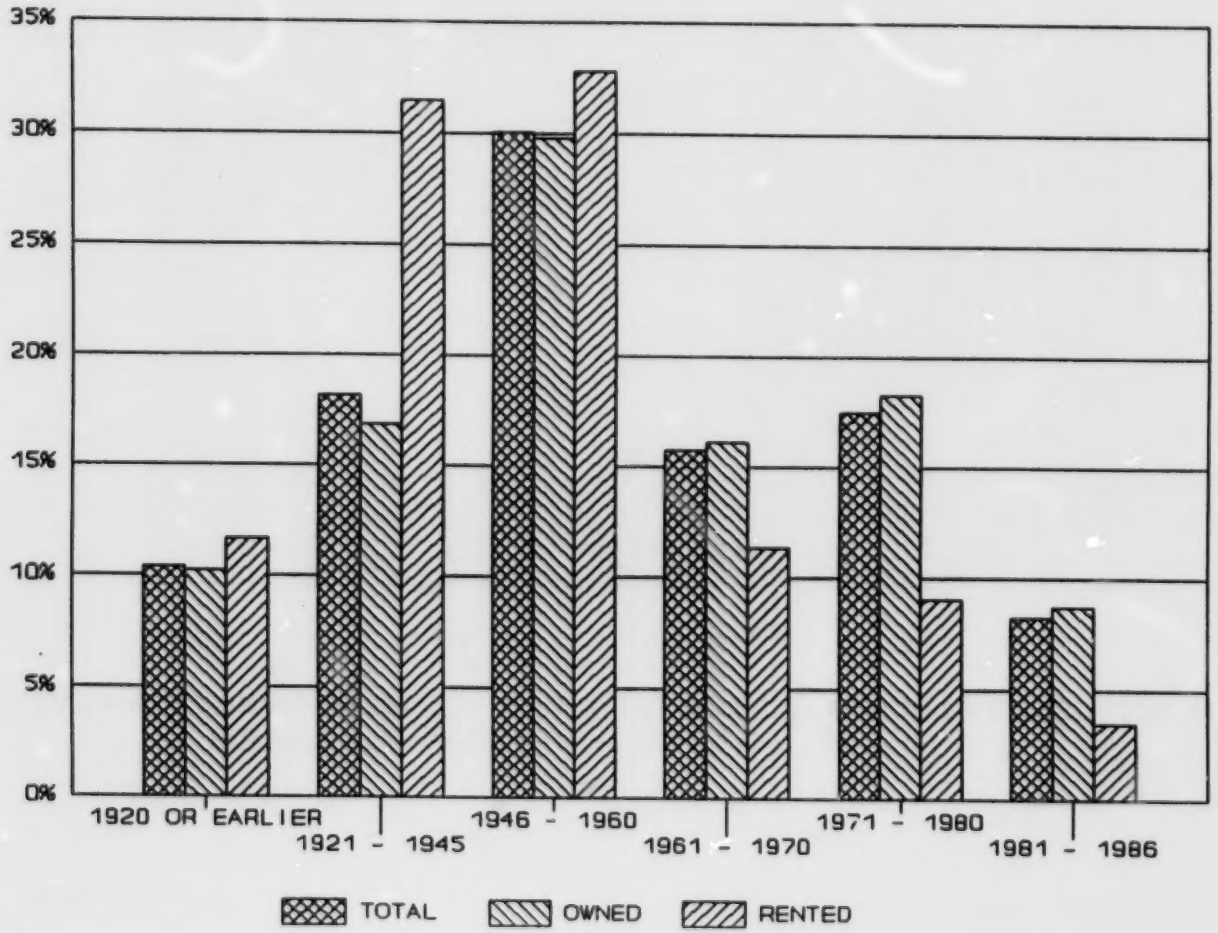


FIGURE 7- WINNIPEG RENTAL HOUSING MARKET 1986:
RELATIVE PROPORTIONS OF OWNED, AND RENTED, SINGLE DETACHED UNITS BY PERIOD OF CONSTRUCTION

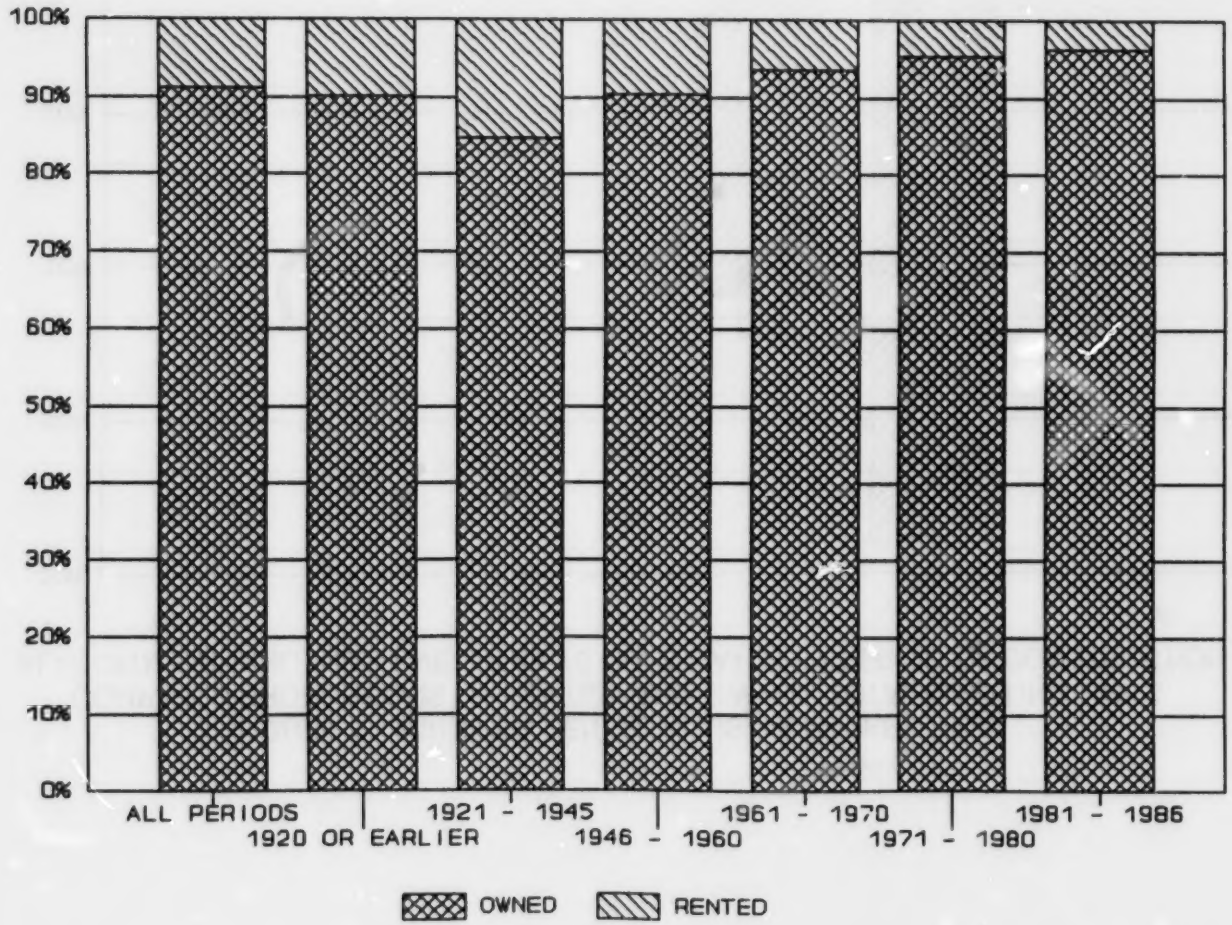


FIGURE 8 - WINNIPEG RENTAL HOUSING MARKET 1986:
COMPARED PROPORTIONS OF RENTED, AND OWNED, TOTAL DWELLING UNITS
IN APARTMENT BUILDINGS FIVE STOREYS OR GREATER BY PERIOD OF CONSTRUCTION

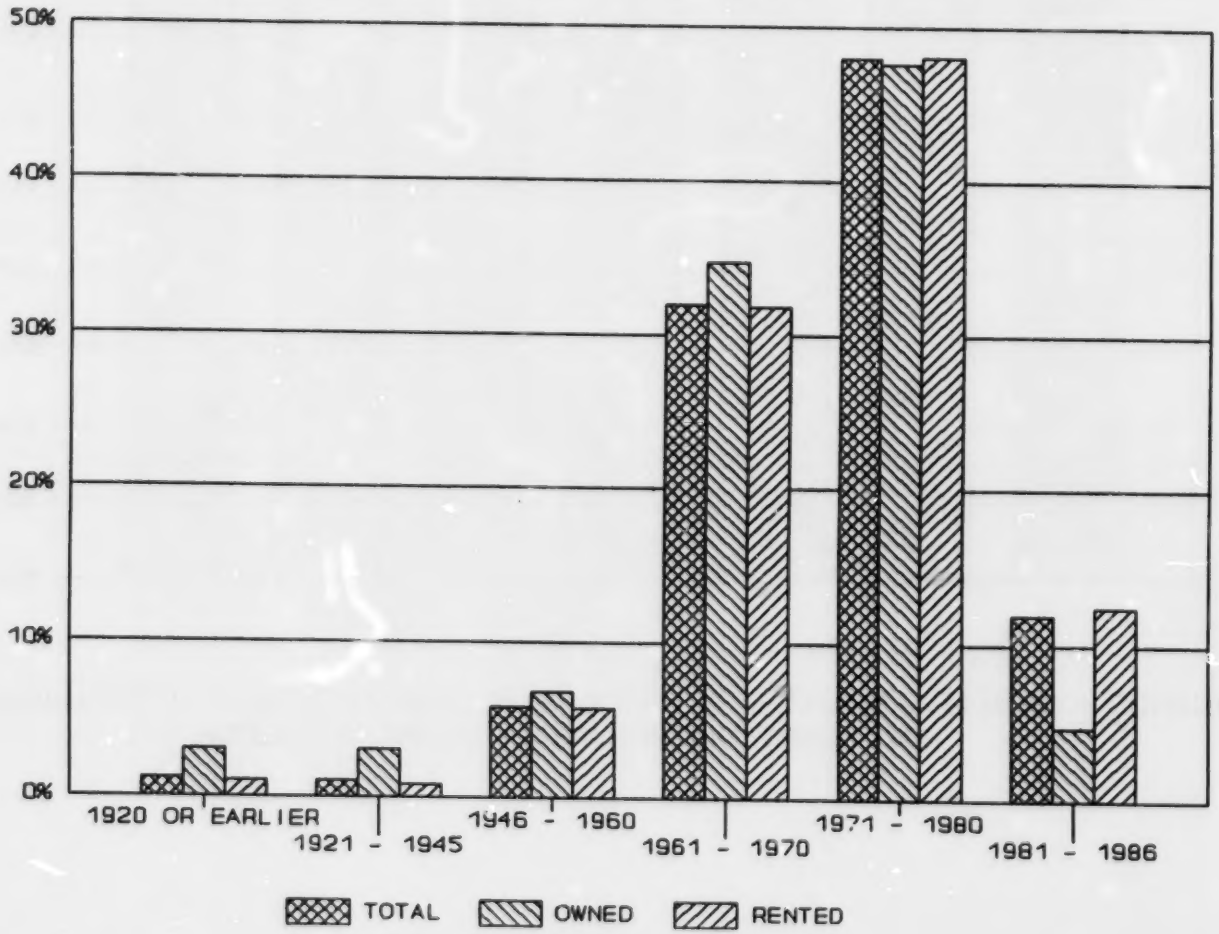


FIGURE 9 - WINNIPEG RENTAL HOUSING MARKET 1986:
RELATIVE PROPORTIONS OF RENTED, AND OWNED DWELLING UNITS,
IN APARTMENT BUILDINGS FIVE STOREYS OR GREATER BY PERIOD OF CONSTRUCTION

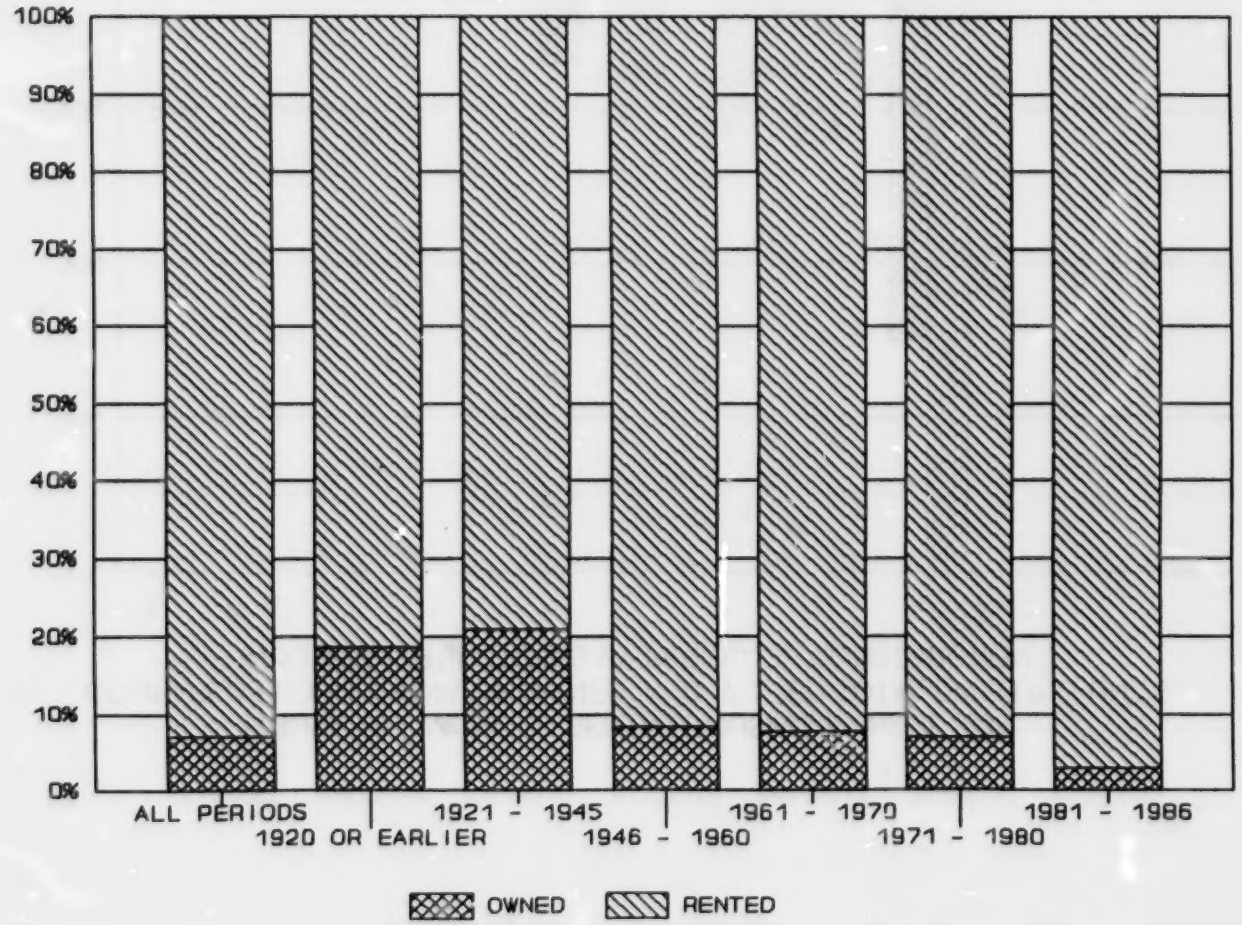


FIGURE 10 - WINNIPEG RENTAL HOUSING MARKET 1986:
COMPARED PROPORTIONS OF OWNED, AND RENTED TOTAL DWELLING UNITS,
IN "OTHER" STRUCTURES BY PERIOD OF CONSTRUCTION

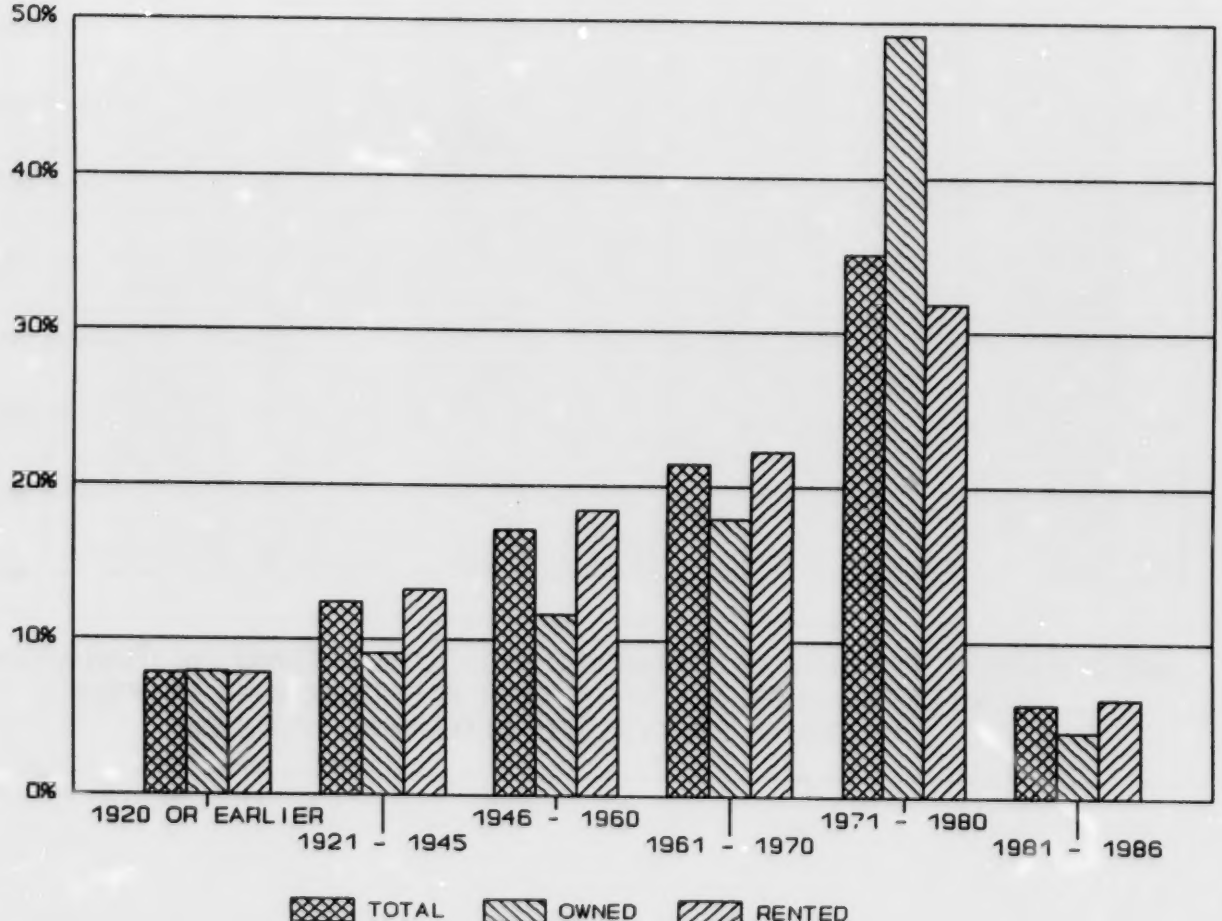
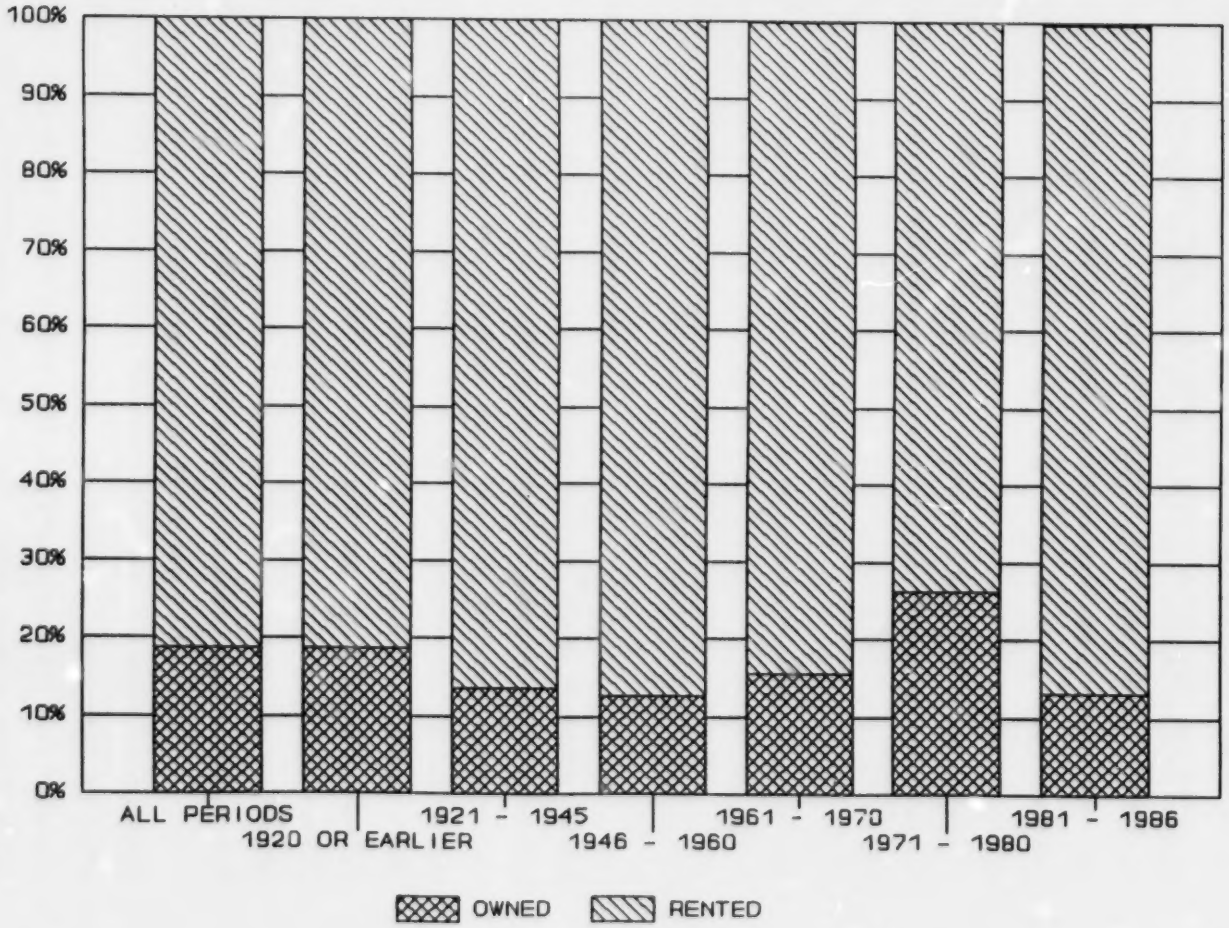


FIGURE 11 - WINNIPEG RENTAL HOUSING MARKET 1986:
RELATIVE PROPORTIONS OF OWNED, AND RENTED DWELLING UNITS,
IN "OTHER" STRUCTURES BY PERIOD OF CONSTRUCTION



older units, because condominiums were virtually non-existent as a housing option in Winnipeg during this period. With the exception of the 1970s and pre-1921 periods of construction, it may be generally stated that most dwelling units contained in "other" structural types are part of the rental stock, regardless of their period of construction.

5.0 SPATIAL ANALYSIS OF SUB-MARKET VARIATIONS AMONG CHARACTERIZATION AREAS

Further details of the Winnipeg rental market and its component sub-markets were rendered through the spatial analysis of the data by neighbourhood characterization area (NCA). The analysis began with an exploration of Winnipeg's urban growth over the different periods of construction. This provided a basis on which to examine the historical growth and distribution of the rental market as a whole, as well as its sub-markets. Each rental sub-market was then examined by structural type, on the basis of the total 1986 rental stock and by period of construction. The results of this analysis for the single-detached sub-market raised a number of other questions which were further explored.

5.1 THE SPATIAL GROWTH OF THE WINNIPEG RENTAL MARKET

This section describes the growth of 1986 rented units throughout Winnipeg based on their period of construction. To provide a means of assessing the expansion of rental market, the growth of the entire stock of 1986 occupied dwellings was first examined.

5.1.1 The Spatial Growth of the Total Housing Stock

Maps 4 to 9 illustrate the spatial growth of the Winnipeg housing stock by displaying the total of occupied residential dwellings by their period of construction. The relative concentrations of housing stock described within each of these maps indicate those areas of Winnipeg which contain predominantly older or younger housing stock. Those areas with the highest concentrations of older stock (pre-1945) are primarily located in neighbourhoods near the central business district (CBD), particularly in the city's old North End, and West End, as well as older parts of St. Boniface, St. Vital, Elmwood and River Heights. Newer housing is found further from the CBD, with post-war housing activity concentrated in East Kildonan, West Kildonan, Fort Garry, St. James, South River Heights, St. Vital and St. Boniface. Continued residential expansion is evident in outer suburbs such as Fort Richmond, Southdale, Assiniboia and the Kildonans during the 1960s and 1970s.

Map 4 indicates that by 1920, a great deal of the metropolitan area had already been densely settled, and units had been built over a very wide area. As expected, these units are highly concentrated in some of the city's oldest neighbourhoods, including Westminster, Balmoral, Armstrong Point and Crescentwood, each which contained 35.1% to 52.0% of their dwelling stock from this period. Other areas with relatively high concentrations of older stock include McMillan, Lord Roberts, St.Matthews, West Alexander, North Point Douglas, West Elmwood, St. John's, St. John's Park and Luxton.

Map 5 indicates only three neighbourhoods which have more than 50.0% of their dwelling units built during the inter-war period of 1921-1945: North River Heights, Old Tuxedo and Kingston Crescent. All of three of these areas were built as middle-class or neighbourhoods and have remained as such. With the exception of Wellington Crescent, those areas with 30.1% to 50.0% concentrations of inter-war units were built for working-class or middle-class households, and have also remained as such. These include nearly every NCA in the city's old West End, including Westminster, Balmoral, Spence, St. Matthews, Minto, Daniel McIntyre and Sargent Park; much of the old North End, including North Point Douglas, William Whyte, Burrows Central, St. John's, St. John's Park, Inkster-Faraday, Luxton and Seven Oaks; and parts of St. Vital, St. Boniface and the East Kildonan NCA of West Elmwood.

Map 6 indicates the concentration of post-war residential development in what may be described as "older suburbs" or "inner suburbs." These include many neighbourhoods which surround the pre-war city, but are still closer to the CBD than the mass-produced suburbs of the 1960s and 1970s. Key examples of older suburbs include the Point Road, Wildwood, Crescent Park and Beaumont neighbourhoods of Fort Garry; Riverview in Fort Rouge; Sir John Franklin, Central and South River Heights; the St. James NCAs of Jameswood, Silver Heights and Deer Lodge; Munroe West and Rossmere in East Kildonan, Jefferson in West Kildonan, and St. George in St. Vital. More than 50.0% of all residential units in these areas were built in the 1946-1960 post-war era.

One important trend of residential development in Winnipeg's history is the increasing size of subdivisions, indicated by the higher percentage ranges in the legends of **Maps 7 to 9** for more recent periods of construction. These maps also indicate the location of these high concentration ranges in the outer suburbs. It is also important to note that construction of new units was by no means restricted to these areas, and that residential unit development occurred throughout the metropolitan area.

5.1.2 The Distribution and Development of Rental Dwelling Units

Given this brief overview of residential development in Winnipeg, it is possible to examine concentrations of rental tenure within the context of the housing market as a whole. **Map 10** describes the distribution of 1986 rental tenure in Winnipeg for all dwelling unit types over all periods of construction. *The most broadly based concentrations of rental activity are found in and around the city's downtown area, and in the adjacent or nearby NCAs of Spence, Centennial, Lord Selkirk Park, River Osborne and McMillan. Other concentrations are found along major thoroughfares in the suburban areas. Suburban areas with between 75.0% and 100.0% rental tenure include Niakwa, Polo*

Park, Pembina Strip, Montcalm, Leila-McPhillips Triangle and Valhalla. Concentrations of rental activity comprising 50.0% to 75.0% of occupied dwelling units also occur immediately outside the CBD, in such older neighbourhoods as Westminster, West Alexander, Dufferin, William Whyte, North Point Douglas, Roslyn, Ebby Wentworth and Central St. Boniface, and in suburban concentrations such as Worthington, Booth, Heritage Park, Grant Park and Rossmere. *Those areas with the smallest proportions of rental tenure include those suburbs furthest from the CBD, and the older middle-class and upper-class suburbs* of North River Heights, Wellington Crescent, Wildwood Park and Garden City.

Maps 11 to 16 indicate the proportion of dwelling units in all structural types built during each period of construction which were rented in 1986. As mentioned earlier, the 1986 data represent a "snapshot" of the rental market, and do not distinguish between those dwelling units which were purposefully constructed for the rental market and those which had originally been built for the ownership market.

Most of the rented units built in 1920 or earlier **(Map 11)** *were concentrated in and around the CBD, with large concentrations of old units in West Alexander, Armstrong Point, Kensington, and Wellington Crescent. These areas represent both affluent and underprivileged neighbourhoods, which suggests that older rental stock is not a completely reliable indicator of urban poverty.* Other areas with moderate concentrations of old rented units included McMillan, Riverview and Crescentwood, south of the Assiniboine River; Westminster, Memorial, Spence and St. Matthew's, west of the CBD; North St. Boniface, Centennial and Brooklands, south of the CPR main line; and North Point Douglas, William Whyte, St. John's, Luxton, and Burrows Central in the city's old North End. These areas also contain large concentrations of rented units built between 1921 and 1945 **(Map 12)**.

In addition to the city's old North End and West End, moderate concentrations of rented units built during the inter-war period were also found in the older neighbourhoods of St. James, Fort Rouge, Fort Garry, East and West Kildonan, St. Boniface and St. Vital. Greater concentrations of post-war rental unit construction are evident in **Map 13**, with increasing numbers of rented units in the middle and outer suburbs. **Maps 14 and 15** *indicate the suburban concentrations of rental units built during the 1960s and 1970s, with relatively fewer inner-city units having been built during these periods.* **Map 16** indicates the reduced rate of rental unit construction during the early 1980s, with those few areas of concentration occurring in outer suburbs and/or along major thoroughfares. These notable areas include Inkster North, South Tuxedo, Springfield North and Vista.

5.2 RENTAL SUB-MARKETS DEFINED BY STRUCTURAL TYPE

The variables contained in the data set made the definition of sub-markets by structural type the most practical means available. In the following discussion, the proportion of the rental market dominated by single-detached, high-rise, and other structural types will be examined, for individual and total periods of construction.

5.2.1 Single-Detached Dwelling Units

The 11,700 single-detached units rented in 1986 comprised 12.75% of the units in the total rental market, and 8.82% of all single-detached units in Winnipeg. **Maps 17 to 23** indicate the proportion of rented dwelling units comprised by single-detached structures for Winnipeg NCAs. For all periods of construction, as portrayed in **Map 17**, *single-detached units comprised a majority of the rental units in a wide variety of neighbourhoods. While single-detached units dominate all rented structural types in these areas, it is interesting to note that different neighbourhoods serving virtually every economic class contain large proportions of these units.* These NCAs range from such affluent areas as Wellington Crescent and North River Heights, through middle-class neighbourhoods such as Wildwood, Beaumont, Archwood, Springfield North and Dakota Crossing, to working-class areas such as Brooklands, Robertson, Burrows Central and Kensington.

Single-detached structures comprised the majority proportion of pre-1921-built rented units in several NCAs (**Map 18**), including the old West End neighbourhoods of Minto, Sargent Park, Daniel McIntyre, Weston and Brooklands; the old North End neighbourhoods of Shaughnessy Park, Burrows Central, Inkster-Faraday and Jefferson; and the neighbourhoods of Chalmers and Talbot Grey in Elmwood. King Edward NCA in St. James, and Lord Roberts NCA in Fort Rouge, also contained single-detached units as a majority of the rented units built in 1920 or earlier. Norwood West and Sir John Franklin also contained a high proportion of single-detached units for this period.

As discussed earlier, *64.32% of Winnipeg's single-detached housing rented in 1986 was built during either the 1921-1945 inter-war era (31.5%) or in the 1946-1960 post-war era (32.82%).* This concentration of rental stock is represented in **Maps 19 and 20**, which indicate the spatial shift in unit construction from older city neighbourhoods to the first post-war suburbs. While inter-war single-detached rental units were concentrated in the city's old North End, West End, Elmwood, Fort Rouge, and inner portions of St. James (King Edward, Kensington, Jameswood), Fort Garry (Point Road), and St. Vital (Glenwood), the post-war single-detached units were built in the more distant NCAs such as Wildwood, Beaumont, Varsity View, Robertson, Garden City, Kildonan Drive, Norberry, Worthington,

Pulberry and Central River Heights. Many of these post-war units rented in 1986 also comprised the majority of rental dwellings in such distant suburbs as Transcona (Radisson NCA) and St. Norbert.

Newer single-detached units, built at successively further distances from the CBD in mass-produced suburbs, command an increasing share of the single-detached rental market as their period of construction becomes progressively older. While Maps 21 to 23 indicate the further suburbanization of rented single-detached construction built during the 1960s, 1970s and early 1980s, they also indicate a city-wide increase in the proportion of NCA rental units comprised by single-detached structures as units age. *While it was expected that the most outer suburbs would exhibit increasing concentrations of rented single-detached units as the housing stock aged, this was not always the case.* Of all rented dwelling units built in The Maples in the 1970s, between zero and 10.0% were single-detached, but for rented units built during the early 1980s, between 10.0% and 25.0% were single-detached. This indirectly suggests that even if The Maples was dominated by single-detached units as a structural type, there is a relatively greater chance of finding a newer unit being rented than a slightly older unit, a trend which runs contrary to the city-wide case. This question of how quickly owner-occupied single-detached units shift to the rental market will be discussed in greater detail in section 5.3.1.

5.2.2 Apartment Buildings Five Storeys or Greater

While rented units in high-rise apartment structures accounted for 30.53% of the total 1986 rental market, these units were concentrated in different areas of the city. Map 24 portrays the distribution of 1986 rental units contained in apartment buildings five storeys or greater. *This distribution indicates a high concentration of units in Winnipeg's Downtown, and the adjoining neighbourhood of Roslyn, and a scattering of other concentrations in the suburban neighbourhoods of Alpine, Niakwa Park, Pembina Strip, Cloutier Drive, Polo Park, Birchwood and Valhalla. Other suburban neighbourhoods contain concentrations of high-rise structures due to their location on major thoroughfares, but are not dominated by either high-rise housing, or rental housing as such.* These include Worthington and Pulberry in St. Vital; Rockwood, Grant Park, Central River Heights and Mathers in the Fort Rouge/South River Heights area; Woodhaven and Booth in St. James, Kildonan Drive in East Kildonan and Central St. Boniface.

The gradual expansion of high-rise construction to suburban areas is illustrated by Maps 25 to 30. All high-rise 1986 rental structures built prior to 1921 were located in the inner city, specifically in the River-Osborne, West Alexander and Downtown NCAs (Map 25). The inter-war era of 1921-1945 (Map 26) indicates little change in this pattern, with the exception of an expansion from River-

Osborne into the adjoining area of McMillan, and the development of high-rise structures along Portage Avenue in Birchwood and Bruce Park. In the post-war era of 1946-1960 (**Map 27**), the linear development of high-rise rental structures continued westward along Portage Avenue into Deer Lodge, Silver Heights and Booth; northwest into Weston and Lord Selkirk Park, and southwest along Grant Avenue in Grant Park, Rockwood and Central River Heights.

The first evidence of "satellite" high-rise development is also evident in Pembina Strip, Worthington, Alpine, Niakwa Park and Rossmere. As indicated by **Map 28**, the 1960s witnessed a continued expansion of high-rise construction based on the patterns of extension from adjoining high-rise areas, and development along major traffic thoroughfares. "Satellite areas" of high-rise rental construction established in the post-war era continued to attract new structures, in existing and adjoining areas. This continued suburban expansion is most evident in the communities of Fort Garry, St. James, St. Vital, and East Kildonan. These established high-rise areas continued to attract new construction during the 1970s and 1980s (**Maps 29 and 30**).

5.2.3 "Other" Structural Types

Rowhouses, apartment buildings less than five storeys and other structural types comprised 56.68% of the 1986 rental market, and with the exception of the 1981-1986, comprised the majority of rented units built during each period of construction. It is unfortunate that Statistics Canada decided to combine these structural types in a single category, since each represents unique market product, but as an aggregate category of "other" structural types, an number of spatial characteristics are revealed.

Map 31 illustrates the concentration of "other" structural types among all rented dwelling units for all periods of construction. The wide range of concentration among NCAs distinguishes those spatial locations where these units predominate in the marketplace, and where both single-detached and apartment blocks five storeys or greater comprise a complementary small proportion of a neighbourhood's rental units. *Low-rise multiple unit structures comprise the vast majority of the rental market in many outer suburbs, including Assiniboia, Charleswood, The Maples, Windsor Park, Southdale and Waverley Heights. They also predominate in several neighbourhoods immediately surrounding the inner city,* such as Westminster, McMillan, West Alexander, Balmoral, St. Matthews and Spence. This predominance continues into Daniel McIntyre, Sargent Park, Crescentwood, Earl Grey, Ebby Wentworth and other older neighbourhoods.

As illustrated in **Map 32**, *"other" dwelling unit types comprised the vast majority of rented occupied dwelling units built in 1920 or earlier in many older residential neighbourhoods,* including

Westminster, Balmoral, West Alexander, Central St. Boniface, and the Fort Rouge neighbourhoods of McMillan, Earl Grey and Rockwood. It is interesting to note that even during this early period, multiple unit rental housing less than five storeys was constructed in older suburbs such as Kern Park in Transcona, Norberry in St. Vital, and King Edward in St. James. These units also dominate the construction of this period in most other inner-city neighbourhoods, including the remainder of old St. Boniface, much of the old North End, and the Fort Rouge neighbourhood of Riverview.

For dwelling units rented in structures built during the 1921-1945 construction period, "other" types dominated the neighbourhood of McMillan, and the adjacent areas of Roslyn and Crescentwood, as indicated by **Map 33**. These neighbourhoods comprise an extensive zone surrounding the CBD which is dominated by "other" structures. Other concentrations occur in the older suburbs of St. James, Tuxedo and St. Vital. Two anomalies also appear on this map: The Maples and Windsor Park both appear to have high proportions of "other" types for rented dwellings built during this period, but unlike areas immediately surrounding the CBD, these neighbourhoods do not contain a large absolute number of rental units.

Map 34 *dramatically illustrates the post-war 1946-1960 suburban expansion of "other" structural types, and their continued abundance in neighbourhoods surrounding the CBD. The suburban development tends to occur along major arteries*, such as Pembina Highway, Portage Avenue, Henderson Highway, Main Street and St. Mary's Road into the suburban communities of Fort Garry, St.James, East and West Kildonan, and St. Vital. "Other" units also figured very prominently for rental occupancy among units of this vintage in McMillan, Earl Grey, Westminster, Balmoral and Spence NCAs, neighbourhoods in St. Boniface, as well as Mynarski and St. John's Park in the old North End. Notable areas where "other" structures do not dominate the rental units of this period include Robertson, Burrows Central and Dufferin, also in the old North End; Minto in the old West End, Booth and Birchwood in the western reaches of St. James, and the older, upper middle-class neighbourhoods of Wellington Crescent and North River Heights.

The continued post-war suburban expansion of "other" units and their dominance of rented units is evident in **Map 35**, *which outlines the construction period 1961-1970. This period marks the continuing decline of the CBD as a site for "other" unit types, and its increasing importance as a location for high-rise apartments*. Another area of note which follows this trend is the neighbourhood of Roslyn. The 1960s also marks the beginning of a decline in "other" unit construction in a few older neighbourhoods such as Central St.Boniface, St.Matthews, North Point Douglas, Dufferin, Grant Park and Rockwood, as development moves further away from the CBD. Other older neighbourhoods in the city's old West End, North St. Boniface, River Osborne and other Fort Rouge NCAs were all

dominated by "other" unit structures for 1960s vintage occupancy. Outer suburban neighbourhoods also indicate a high proportion of rental tenure among "other" units for this period. These latter areas include many neighbourhoods in Fort Garry, East Kildonan, West Kildonan, parts of the old North End, St. Vital and Transcona. The outer suburbs of Windsor Park, Southdale, Fort Richmond, Crestview, Buchanan and River East all figure strongly.

As discussed earlier, the post-war period witnessed a huge number of rental unit construction, and "other" structural types comprised the majority of projects until the 1980s. **Map 36** *indicates the continued suburban expansion of rental construction during the 1970s, and the continuing importance of "other" unit types.* While the city's old West End continued to attract a considerable proportion of rental tenure for these units, this attraction significantly declined during the early 1980s (**Map 37**). This latter period also witnessed the spatial discontinuity of construction, with projects tending to be located in the outer suburbs or in the inner city, with few units being created in most of the established neighbourhoods.

5.3 SINGLE-DETACHED DWELLING UNITS: FURTHER EXPLORATIONS OF A SUB-MARKET

As a rental sub-market, single-detached units have received relatively little attention, and the data set offered a unique opportunity further to explore this segment of the market. Representing 12.76% of the total 1986 marketplace with 11,700 units, two fundamental questions were raised: (1) how do rented single-detached units compare to owner-occupied units of this type, and (2) what periods of construction dominate the single-detached rental market. Both of these questions were addressed spatially and are discussed below.

5.3.1 Single-Detached Rented vs. Single-Detached Ownership

While rented units comprise a small proportion of the single-detached units in Winnipeg, they are found in the vast majority of residential neighbourhoods, as indicated by **Map 38**. Areas with relatively high concentrations of rented single-detached units were located immediately south of the airport in Jameswood, and in Polo Park, Edgeland and Pembina Strip. It is interesting to note that all four of these areas are essentially suburban, but are marked by special circumstances. Both Edgeland and Jameswood are located near military bases and appear to contain large quantities of rental single-detached housing operated specifically for military personnel. Polo Park and Pembina Strip, areas of predominantly commercial land use and multiple unit residential dwellings, contained only ten single-detached units each, all of which were rented.

Neighbourhoods with high absolute concentrations of rented single-detached units included areas where the majority of single-detached dwellings are rented, such as River-Osborne and Centennial, which are immediately adjacent to the Downtown area. Rivergrove, also grouped in this category, had only 25 single-detached units, of which 15 were rented. Large concentrations of rented single-detached units were also found in neighbourhoods surrounding the Downtown area of the city. Some of these include Spence, and the neighbourhoods of the City's old West End; Weston, North Point Douglas, William Whyte, Dufferin, Selkirk Park and other neighbourhoods in the City's old North End; Roslyn, McMillan and adjacent areas in Fort Rouge; and to a lesser extent, neighbourhood areas in St.Boniface, Elmwood, St. Vital and old St. James.

Maps 39 to 44 indicate the proportions of single-detached housing rented, from the total number of single-detached units built by period of construction. This series is a period-by-period breakdown of the results displayed in **Map 38**, which indicated the proportion of single-detached units rented from the total of all single-detached units, for all periods of construction. **Maps 39 to 44** may be directly compared with **Maps 45 to 50**, which are discussed later in section 5.3.2.

Map 39 *indicates the 23.70% of rented single-detached units which were built in 1920 or earlier.* This map roughly indicates a concentric pattern, where rental tenure of these units is highest near the central business district, and becomes less concentrated with increasing distance from the CBD. The gradient of this decrease appears to be more gradual in the northern and western neighbourhoods of the city than in the south, where the high concentration in River Osborne quickly declines through McMillan to Earl Grey and Crescentwood. From this map, it is clear that of the oldest single-detached units in Winnipeg, most continue to belong to the ownership market, while those which are rented tend to be concentrated near the CBD.

Map 40 indicates a much higher proportion of rental tenure for units built from 1921 to 1945, particularly among inner-city neighbourhoods, including North Point Douglas, Centennial, Dufferin, William Whyte, West Alexander, Spence and River Osborne. *These NCAs represent some of the most important areas for the rented single-detached sub-market, since 34.09% of all such units were built during the inter-war era.*

For the *25.52% of rented single-detached units built during the 1946-1960 era*, the neighbourhoods of River-Osborne, Rivergrove, Edgeland and Jameswood all contained very high rates of 1986 tenure (**Map 41**). Other areas which maintained a high rental rate for single-detached units were North Point Douglas, Dufferin, William Whyte, Centennial, and to a lesser extent, Spence, St. Matthews, Balmoral, Westminster and Crescentwood. Again, the post-war expansion of suburban

construction is evident, as is the relatively low proportion of rented single-detached units. Notable exceptions to this latter trend are the neighbourhoods of Dufresne, Riverbend and St. Norbert.

Single-detached units built during the 1960s had very high proportions of rental tenure in 1986 within particular neighbourhoods, such as Central St.Boniface, Balmoral, Westminster and Jameswood, as indicated by **Map 42**. Other areas with fairly high rental rates for these units were Earl Grey, Riverview, King Edward, St. John's, Dufferin, Centennial and Talbot Grey. It is interesting to note the relatively large proportion of rental tenure in such suburban neighbourhoods as Mathers, Worthington and Dakota Crossing. Older residential neighbourhoods near the CBD have retained similar levels of rental tenure for this category.

Map 43 appears to indicate that very few single-detached units were built in the inner city during the 1970s, with the exception of infill and replacement units, most of which were rented in 1986. The outer suburbs, where most of the 1970s construction took place, showed little rental activity for single-detached units in 1986. Modest rates of rental tenure for 1970s-built units in King Edward, Central St. Boniface, Chalmers and Lavalee suggest the growth of these areas as rental neighbourhoods.

Map 44 indicates the relatively short period of time required for a single-detached rental market to grow in what was presumably a predominantly owner-occupied neighbourhood. However, both The Maples and Fort Richmond show 10.0% to 15.0% rental rates for units built during the early 1980s and rented in 1986, but only zero to 10.0% rental rates for units built during the 1970s. The greater tendency for the rental of newer single-detached units than older units, suggests that while on average greater concentrations of rental activity occur as single-detached units age, this trend does not occur uniformly throughout the city.

5.3.2 Single-Detached Rented Units, By Period of Construction

Maps 45 to 50 *indicate the relative importance of different construction periods for different neighbourhoods within the market for single-detached rental housing. For example,* **Map 45** *shows that of all rented single-detached units in River Osborne, between 25.1% and 50.0% were built in 1920 or earlier.* As expected, most of these units are located in the older areas of the city, with high concentrations in the McMillan, River Osborne, Spence and Luxton Neighbourhoods. *Many neighbourhoods with concentrations of older single-detached rented units also contain large numbers of these units built between 1921 and 1945*, as indicated on **Map 46**. Neighbourhoods in the city's old West End, particularly Westminster and Memorial, the old North End, Elmwood, Fort Rouge and St. Boniface all contain large proportions of units built during this period. Some of the highest

concentrations of units built during the inter-war years are located further from the downtown area simply because of the outward growth of the city during that time. These "pre-war suburbs" include Old Tuxedo, Archwood and Seven Oaks.

Map 47 indicates the rapid post-war suburban growth of single-detached construction and the higher proportion of rental tenure in this newer housing in suburban neighbourhoods. The vast majority of rented single-detached units in such suburban areas as Wildwood Park, Rivergrove, Edgeland, Norberry and Dufresne were built between 1946 and 1960. **Map 48** marks the continuation of the post-war suburban development during the 1960s. The higher concentrations in such neighbourhoods as Westdale, Kildare-Redonda, Margaret Park, Mathers, Pulberry, and the neighbourhoods of Assiniboia, indicate the domination of this construction period among rented single-detached units in those areas. It is interesting to note that many of the established neighbourhoods within or near the inner city also contain some of this newer construction as part of their single-detached rental stock. This would appear to indicate areas of strong demand for single-detached rental housing of any vintage.

The trends evident in **Map 48** are further evident in **Map 49**, but the frequency of single-detached housing built during the 1970s is virtually zero in the older, inner suburbs, and marginal in most inner-city neighbourhoods. Single-detached rental housing in the suburbs continues to reflect the period of construction during which most of the sub-divisions were built. For example, most of the rented units available in Vista and Meadowood in St. Vital were built during the 1970s, while Pulberry, located just to the northwest in the same community, contained no such units built during this period. Other concentrations of 1970s construction in the single-detached rental market include areas of Charleswood such as River West Park and Elmhurst, Munroe East in East Kildonan and The Maples in West Kildonan. As indicated by **Map 50**, virtually all of the single-detached rental housing built during the first half of the 1980s was built in Winnipeg's outer suburbs.

6.0 GENERALIZED SPATIAL SUB-MARKETS

The analyses presented in the previous section provide considerable detail in describing the distribution of rental sub-markets based on structural type and period of construction, but do not systematically define spatial sub-markets for all structural types of rental housing. For example, Map 10 offers some indication of rental sub-market concentration, but also illustrates the considerable spatial extent of rental housing throughout the built-up areas of Winnipeg. *Since the data set permitted the definition of sub-markets by structural type as well as by location, there remained the task of defining generalized spatial sub-markets for each structural type, and for the total of all structural types. This section explains generalized spatial sub-markets.*

6.1 METHODOLOGY

Generalized spatial sub-markets were defined in three steps, using market-share criteria. The first step examined spatial market shares for the total rental market, the second step examined spatial market shares for city-wide structural sub-markets, and the third step analyzed the structural content of spatial market shares for the total rental market.

To define generalized rental sub-markets in the first step, NCAs were listed according to the proportion of their occupied dwelling units which were rented, and the proportion of the total Winnipeg rental stock which they contained. This list is included as Table 1 in Appendix C. All of those NCAs with 50.0% or more of their total dwelling units rented, and all those which contained at least 1.0% of the city's total rented occupied units were selected for analysis as sub-market concentrations. Map 51 illustrates these selected NCAs, and also indicates those NCAs which satisfied both the 1.0% market share *and* the 50.0% unit share criteria.

In step two, the process of defining spatial sub-markets while accounting for structural type began with the listing of all NCAs according to rental market share and unit tenure share for each class of structure: single-detached, apartment five storeys or greater, and other. These structure lists are included as Tables 2, 3 and 4 in Appendix D. For single-detached units, NCAs were selected for analysis if 20.0% or more of their single-detached units were rented, or if they contained 1.0% or more of the single-detached market. For the structural categories of apartments five storeys or greater, and "other" unit types, NCAs were selected if they contained a 1.0% or greater structural market share, or more than 50.0% of all rented dwelling units contained by structures within the category. The NCAs selected using these criteria for apartments five storeys or greater, single-detached, and other unit types are illustrated in Maps 52, 53 and 54 respectively.

In step three, the NCAs selected from each structure list were then cross-referenced with those meeting both criteria from the total rental market list in order to determine the structural dominance of the generalized spatial sub-markets, which are illustrated in **Map 55**.

6.2 GENERALIZED SPATIAL SUB-MARKETS: TOTAL RENTAL MARKET

Map 51 *illustrates a high concentration of rental market activity within and immediately surrounding the CBD, as well as smaller concentrations in particular suburban areas*. Variations in sub-market definition appear to be greater in suburban areas than near the CBD, but this may not be exclusively due to actual market characteristics. The varying sizes of the NCAs concerned may have a large impact on the definition of spatial sub-markets. For example, neighbourhoods such as North Point Douglas, Burrows-Keewatin and Dufferin are dominated by rental tenure, but each comprises less than 1.0% of the total rental market. On the other hand, larger neighbourhoods such as Jefferson, The Maples and Fort Richmond contain more than a 1.0% share of the total rental market, yet are dominated by owner-occupied housing. For this reason, only those NCAs which satisfied *both* criteria were selected for further analysis by structural type. The only NCA which was retained for further analysis, but which did not perfectly satisfy both criteria, was the small inner-city neighbourhood of Centennial, with over 80.0% rental tenure but a 0.97% share of the total Winnipeg rental market.

6.3 GENERALIZED SPATIAL SUB-MARKETS: APARTMENTS FIVE STOREYS OR GREATER

As depicted in **Map 52**, *most NCAs containing sub-markets for high-rise apartment units comprise both a greater than 1.0% market share of these units for the city, and high-rise units contain the majority of rental units in the neighbourhood*. Only Polo Park and Niakwa Park capture greater than a 1.0% high-rise market share with less than half of their total rental units. However, *while high-rise units are an important component of the total Winnipeg market, they are not always found in those NCAs which capture a large total market share*. For example, William Whyte, McMillan and Westminster NCAs are all indicated on **Map 51** as market share and tenure share sub-markets within the total rental market, but do not meet any sub-market qualifying criteria for apartment buildings five storeys or greater.

By the same token, *NCAs which figure well in the high-rise market do not necessarily qualify as total rental sub-markets*. Again comparing **Maps 51 and 52**, the NCAs of Pulberry, Rockwood and Kirkfield contain a greater than 1.0% share of the high-rise market and their total rental tenure is dominated by dwelling units found in these structures, but none of these NCAs figures highly in the total market. Both of these forms of non-association between sub-markets may be partly explained

by suburban/inner city differential between the two forms, or differences in association with alternative market structures within NCAs, but it may also simply be due to the way in which NCA boundaries have been drawn. As discussed earlier, many high-rise developments occur along major thoroughfares, but these streets are also frequently used to delineate NCA boundaries. The result is the fragmented representation of what in reality constitutes a spatial sub-market. This case presents a good example of how methodological limitations affect the degree of certainty with which interpretations may be conducted, and lends weight to the argument that new areal units may need to be created for spatial sub-market research.

6.4 GENERALIZED SPATIAL SUB-MARKETS: SINGLE-DETACHED

Map 53 *depicts those NCAs which define spatial sub-markets for single-detached units, based on greater than 20.0% rental tenure of NCA single-detached structures, a greater than 1.0% market share of single-detached units in Winnipeg, or both of these criteria. For the most part, the single-detached market is concentrated in the inner-city and within the NCAs of the old North End and Fort Rouge.* The NCA of Jameswood in the western part of the city is adjacent to a large military base, and is almost completely devoted to rental housing for military personnel. Similarly, the small NCA of Edgeland is adjacent to a former military installation, where a concentration of rented single-detached units persists. With the exceptions of Montcalm, Rivergrove and Valhalla, which contain a relatively small number of total single-detached units, and NCAs such as Rossmere A, Jefferson, King Edward, and Fort Richmond, which contain a large market share but a relatively small degree of rental tenure, suburban areas generally do not form the bulk of this spatial sub-market. *The dominant areas of single-detached rental activity occur immediately to the west and north of the CBD, with a dilution of market activity as one moves further westward and northward.* The NCAs of McMillan, Roslyn, River Osborne and Lord Selkirk Park may well be considered as extensions of the inner-city market, since they contain relatively few single-detached units but many of them are rented.

6.5 GENERALIZED SPATIAL SUB-MARKETS: OTHER STRUCTURAL TYPES

The spatial sub-market for other structural types is described by **Map 54**, which depicts a wide distribution of concentrations among inner-city, suburban and older suburban NCAs. Furthermore, relatively few sub-market NCAs are defined by only one of the market share/tenure share criteria. Of all indicated neighbourhoods, only Valhalla, Alpine Place and Booth have more than 50.0% of their rental units in other structural types but a less than 1.0% market share, while Worthington is the only

TABLE 1 - WINNIPEG RENTAL MARKET 1986: GENERALIZED SUB-MARKETS AND THEIR STRUCTURAL COMPOSITION

NEIGHBOURHOOD CHARACTERIZATION AREA	TOTAL RENTAL MARKET			"OTHER" UNIT TYPES			APARTMENTS 5 OR MORE STOREYS			SINGLE DETACHED UNITS			
	UNITS	% OF UNITS RENTED	% OF WINNIPEG MARKET	UNITS	% OF NCA RENTED UNITS	% OF "OTHER" MARKET	UNITS	% OF NCA RENTED UNITS	% OF APT 5+ MARKET	UNITS	% OF NCA RENTED UNITS	% OF S.D. MARKET	% OF S.D. UNITS RENTED
MEMORIAL	3545	94.28	3.87	2450	69.11	4.71	1015	28.63	3.63	85	2.40	0.73	39.53
SPENCE	1690	81.45	1.84	1350	79.88	2.60	175	10.36	0.63	165	9.76	1.41	38.82
EARL GREY	1160	52.85	1.27	735	63.36	1.41	230	19.83	0.82	200	17.24	1.71	17.78
WEST ALEXANDER	990	59.28	1.08	670	67.68	1.29	160	16.16	0.57	150	15.15	1.28	21.74
DANIEL McINTYRE	2130	53.58	2.32	1350	63.38	2.60	400	18.78	1.43	380	17.84	3.25	18.67
McMILLAN	1620	75.88	1.77	1350	83.33	2.60	210	12.96	0.75	65	4.01	0.56	26.53
ST. MATTHEWS	1205	50.42	1.31	925	76.76	1.78	0	0.00	0.00	275	22.82	2.35	20.91
WESTMINSTER	1965	51.98	2.14	1535	78.12	2.95	90	4.58	0.32	335	17.05	2.86	18.21
WILLIAM WHYTE	1515	56.95	1.65	840	55.45	1.62	190	12.54	0.68	485	32.01	4.15	32.68
CENTENNIAL	890	81.28	0.97	385	43.26	0.74	295	33.15	1.05	210	23.60	1.79	56.00
RIVER OSBORNE	2745	95.31	2.99	1495	54.46	2.88	1165	42.44	4.16	85	3.10	0.73	51.52
MONTCALM	1745	96.41	1.90	1055	60.46	2.03	670	38.40	2.39	15	0.86	0.13	27.27
ROSSMERE A	3015	51.98	3.29	1690	56.05	3.25	1195	39.64	4.27	130	4.31	1.11	5.07
CENTRAL ST. BONIFACE	2395	72.69	2.61	1240	51.77	2.39	990	41.34	3.54	165	6.89	1.41	18.54

TABLE 1 - WINNIPEG RENTAL MARKET 1986: GENERALIZED SUB-MARKETS AND THEIR STRUCTURAL COMPOSITION

NEIGHBOURHOOD CHARACTERIZATION AREA	TOTAL RENTAL MARKET			"OTHER" UNIT TYPES			APARTMENTS 5 OR MORE STOREYS			SINGLE DETACHED UNITS			
	UNITS	% OF UNITS RENTED	% OF WINNIPEG MARKET	UNITS	% OF NCA RENTED UNITS	% OF "OTHER" MARKET	UNITS	% OF NCA RENTED UNITS	% OF APT 5+ MARKET	UNITS	% OF NCA RENTED UNITS	% OF S.D. MARKET	% OF S.D. UNITS RENTED
HERITAGE PARK	1360	84.00	1.48	900	66.18	1.73	435	31.99	1.55	25	1.84	0.21	3.38
PEMBINA STRIP	1230	100.00	1.34	370	30.08	0.71	850	69.11	3.04	10	0.81	0.09	100.00
ROSLYN	2145	72.96	2.34	115	5.36	0.22	2005	93.47	7.16	25	1.17	0.21	50.00
DOWNTOWN	6255	97.05	6.82	2050	32.77	3.94	4170	66.66	14.80	30	0.005	0.003	75.00
GRANT PARK	970	71.59	1.06	440	43.36	0.85	490	50.52	1.75	35	3.61	0.30	10.77
BOOTH	1595	61.70	1.74	725	45.45	1.40	840	52.66	3.00	30	1.88	0.26	3.21
VALHALLA	1760	95.65	1.92	530	30.11	1.02	1225	69.60	4.38	10	0.57	0.09	20.00
ALPINE PLACE	2190	97.99	2.39	855	39.04	1.65	1330	60.73	4.75	0	0.00	0.00	0.00
WORTHINGTON	1925	73.75	2.10	860	44.68	1.85	955	49.61	3.41	115	5.97	0.96	17.16

Source: IUS/SPC Special Tabulations of 1986 Census Data.

NCA with more than 50.0% of rental units in other structures but less than a 1.0% market share of the Winnipeg "other" market. For the remainder of the sub-market NCAs in **Map 54**, *the dominant role of "other" structural types in the Winnipeg rental market ensures that market share and tenure share tend to go hand in hand.*

6.6 GENERALIZED SPATIAL SUB-MARKETS: STRUCTURAL COMPOSITION OF THE TOTAL MARKET

Given the results of the spatial sub-market definition for each structural type and the rental market as a whole, a combined analysis was performed by evaluating the structural content of those NCAs from **Map 51** which contained both a greater than 1.0% market share and a greater than 50.0% rented dwelling unit tenure for the total rental market. These NCAs and their structural contents are depicted in **Map 55**, and described in **Table 1**.

While most NCAs were defined by a majority/minority combination of "other" or high-rise structures, one NCA (Roslyn) was virtually dominated by apartment buildings five storeys or greater. A few of these sub-market NCAs contained proportions of single-detached units which were higher than that for the total city, but single-detached units did not comprise a majority, or a large minority of the rented units in any of these NCAs. Where a structural type represented a majority share of these selected NCAs, they also represented a greater than 1.0% share of the Winnipeg total for the corresponding structural sub-market. In NCAs such as Pembina Strip, River Osborne, Central St. Boniface, William Whyte, St. Matthews, Earl Grey and Rossmere A, "other" structural types contained the majority of rented dwelling units and high-rise structures contained most of the remaining units in these areas. In NCAs such as Booth, Downtown, Worthington and Valhalla, the combination was reversed, such that apartment buildings five storeys or greater contained the majority of rented dwelling units, while "other" structural types contained the bulk of the remainder. *NCAs which contained a proportion of rented single-detached units higher than the city average (higher than 12.76%) were primarily dominated by "other" dwelling types*, and included Earl Grey, West Alexander, Daniel McIntyre, St. Matthews, Westminster, William Whyte and Centennial. The NCA of Centennial had no clear majority of its rented units contained in one structural type.

7.0 THEORETICAL CONTEXTS OF THE RENTAL HOUSING SUPPLY

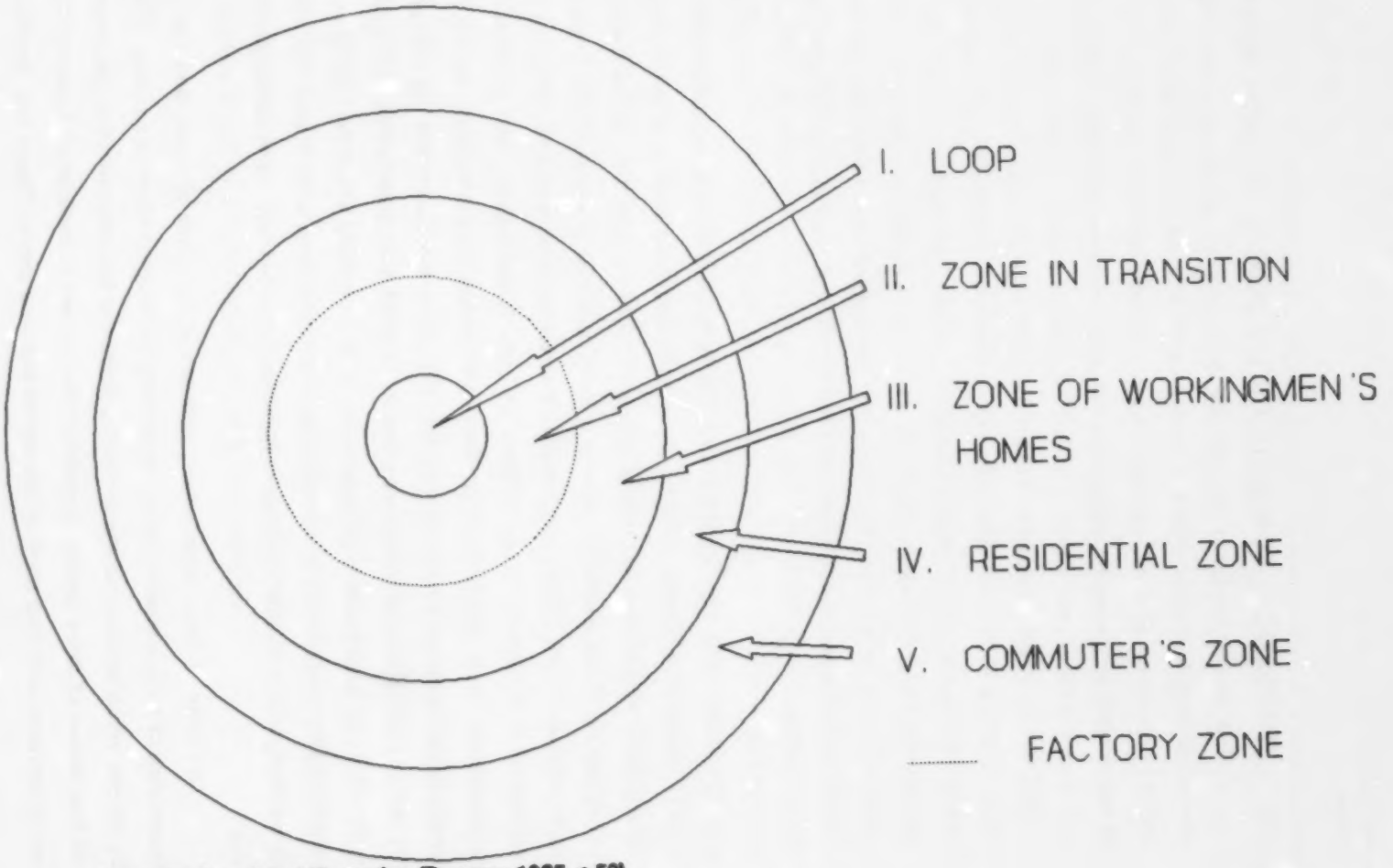
This section compares the empirical description of the Winnipeg rental housing market with theoretical models of urban land use, in an attempt to place the spatial distribution of rental housing and the occurrence of spatial sub-markets into a broader theoretical context. The locational patterns of metropolitan land uses, including rental housing, have been principally modelled by Burgess (1925) and Hoyt (1939) of the "Chicago School" of human ecology. Others such as Harris and Ullman (1945), Alonso (1960) and White (1987) have proposed alternative models to explain the land use structure of the metropolis. The following section briefly reviews these models and compares them with the findings for rental housing supply in Winnipeg. The spatial concentration of sub-markets is then explored in a discussion theoretically underlying market processes, also originating from the Chicago School. It is within this context that the demand side of the rental housing market has been introduced to the paper, and serves as a link to the final discussion of potential research and public policy measures.

7.1 URBAN LAND USE MODELS AND THE WINNIPEG RENTAL HOUSING SUPPLY

Burgess (1925) proposed a model of urban land use in which generalized areas of activity were differentiated according to a series of concentric zones (Figure 12). In the concentric zone model, rental housing was expected to be located within the zone of transition and in the zone of "working men's homes." Hoyt (1939) suggested an alternative configuration, in which urban land uses were segregated in a sectorial pattern (Figure 13), and rental housing was expected to concentrate in working-class and middle-class areas. These two models were followed by the multiple-nuclei pattern proposed by Harris and Ullman (1945), who suggested that urban land use was generally described by neither a concentric zone or a sector pattern. Instead they described an irregular patchwork of land uses, with each area focusing on a particular centre of activity within the metropolitan area, and with rental housing concentrated in working class and middle-class areas (Figure 14). The key implication of the multiple-nuclei model was that no two cities could be expected to exhibit similar patterns of land use.

All three of these models have emphasized the forms of urban land use, and stressed the importance of socio-economic class in explaining the location of rental housing. They were followed by models which emphasized the underlying economic functions which create urban form. Perhaps the best known of these functional models is the bid-rent formulation of Alonso (1960), in which land values decrease with distance from the central business district (Figure 15). In this model, the trans-

FIGURE 12 - THE CONCENTRIC ZONE MODEL OF ERNEST W. BURGESS (1925).



Based on the original illustration (Burgess; 1925, p.50).

portation costs associated with travelling to the city centre are countered by the land costs of city centre, and much like an indifference curve of consumer preference, property owners choose to reside or conduct business at those urban locations which optimize their benefit at the least cost. Extensions of this model to include major transportation intersections as land value "peaks" (Figure 16), analogous to the city centre, have been proposed by Berry (1963) and tested by Knos (1968). In these models, one may expect to find rental housing near these "peaks" and surrounding the city centre, due to the reductions in cost per unit of building multiple-unit structures on a given parcel of urban land.

Through the continuing academic backlash against quantitative urban geography during the 1970s and 1980s, fewer writers have attempted to combine the formal and functional aspects of these models. The historical context of the models of Hoyt and Burgess have earned them their "classical" status, while functional models have been criticized for not sufficiently explaining the development of the metropolis. A recent effort to revise models of metropolitan land use has been produced by White (1987), and is depicted in Figure 17. White combined elements from the concentric zone, sector and multiple-nuclei models, as well as symbolic abbreviations of underlying socio-economic process, to create a schematic picture of the "late twentieth century metropolis" (White, 1987, p. 237). White's model is essentially nucleated in its form, reflecting the bid-rent curve function for multiple city centres and the dispersion of specialized urban functions within the metropolitan area. In this scenario, one expects rental housing to be concentrated near such activity centres, and associated with areas of working class and middle-class households.

Given these models, it is possible to compare them with the pattern of rental housing land use in Winnipeg. Figure 18 *schematically illustrates the generalized sub-markets of rental housing in Winnipeg, and within the context of White's model, depicts the spatial impact of major rivers and railroad lines on the metropolitan landscape. Most concentrations of rental housing outside of the CBD are located near shopping facilities and along major traffic arteries.* Those rental areas in Figure 18 labelled "1" are focused on major shopping centres, each of which contains two "anchor" department stores and a supermarket. Rental areas surrounding medium-sized shopping centres each of which contains a "discount" department store and a supermarket, have been labelled "2." Finally, concentrations of rental activity near community shopping areas dominated by one or two supermarkets have been labelled as "3."

This pattern of concentrated areas corresponds to the multiple nuclei form of Harris and Ullman (1945), and the functional relations hypothesized by Alonso (1960) and Berry (1963). Land values can be expected to rise near areas of intensified commercial activity, precipitating conditions where rented, multiple-unit structures are the most economically produced forms of housing. In contrast, areas of

rented single-detached units tend to occur in a sectoral pattern, beginning at the CBD and extending in a northwest direction. Concentric patterns of activity for Winnipeg's rental housing supply are relatively limited, except for the general concentration of units within the CBD and its adjacent neighbourhoods. While there was some tendency for newer units to be constructed in outer areas of the city, there were also numerous exceptions to this pattern.

7.2 UNDERLYING PROCESSES

Underlying processes which influence the behaviour of housing markets and sub-markets may be differentiated according to their origin with either the demand side or supply side of the economic equation. Bourne (1981) has suggested that increases in the supply of housing stock may be classified according to three broad categories, with specific processes occurring within each category. These three categories are: (1) the construction of new units on previously undeveloped land; (2) the modification of existing structures; and (3) the "replacement of existing units with new construction" (Bourne, 1981, p. 27).

In the spatial analysis of structural types and their periods of construction, the first category was most evident for the development of high-rise apartment buildings and "other" unit types. The second category was most evident in the analysis of single-detached units, while it was virtually impossible to draw information from the data which related to the third category of unit addition. As discussed by Bourne, the construction of new units has been most closely associated with the process of urban growth, particularly the expansion of suburban areas, while the modification of existing structures has been associated with a number of other processes. The extent to which evidence from the Winnipeg rental market supports these processes may lend insight into both their theoretical validity, and their implications for public policy.

7.2.1 Suburban Expansion and High-Rise Apartment Buildings

High-rise apartment buildings have been shown to cluster within and near the CBD, and along major thoroughfares in suburban areas. The development of the downtown high-rise apartment may be explained by the proximity to services, employment and other amenities, but also by zoning regulations which permit increased building heights. Furthermore, expensive downtown land prices may make high-rise buildings the only type of residential structure which is economical to operate.

Reasons for the development of suburban high-rise clusters, however, are less obvious. Their proximity to major thoroughfares may be partially explained by the need for easy-access mass transit by high population densities. The large number of vehicles often housed in underground parking below

the high-rise structure also necessitates accessibility to a major traffic artery. These technical problems underscore the general disruption which would result if high-rise structures were built in established neighbourhoods. As restrictive forms of legislation, zoning regulations have effectively minimized such disruptions, leaving high-rise developers with little alternative but to build on the growing edges of the city. Cheaper land prices and the "blank slate" provided by previously undeveloped land have also been attractive features of new suburban areas. Perhaps most importantly, the suburbs have provided a healthy demand for these units: for young people raised in the inner suburbs who formed many new renting households during the 1960s and 1970s, suburban high-rises had the advantage of providing new units in a familiar environment. This notion is supported by the large increases in high-rise construction during these periods, and their suburban location. Suburban apartment buildings also provided the opportunity for senior citizens to reside near the homes of their children and grandchildren. In sum, existing land use patterns in combination with post-war changes in demographics, culture and transportation, have all contributed to the development of the suburban high-rise sub-market.

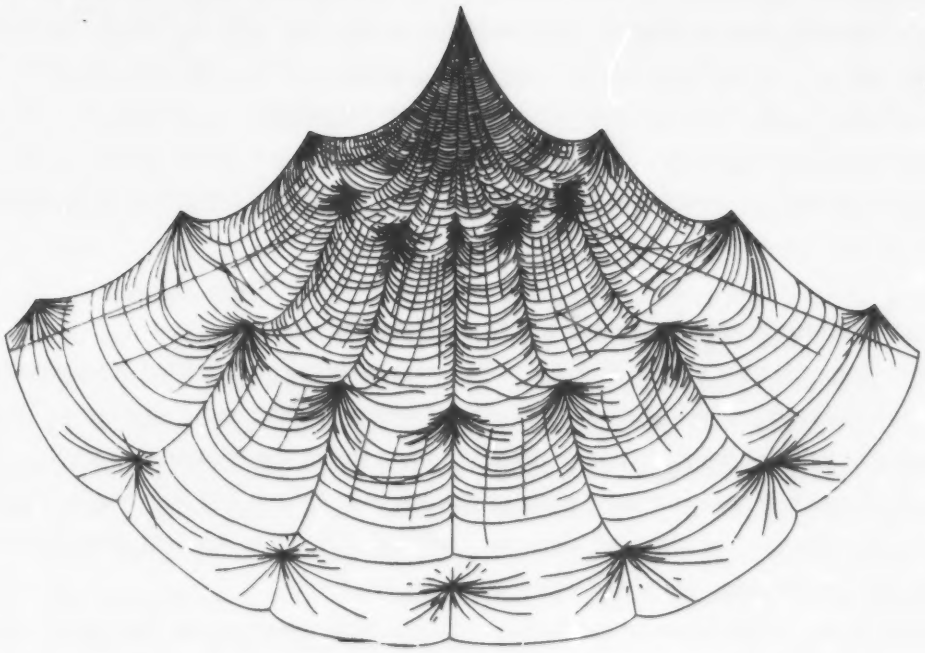
7.2.2 Structural Modification Processes and Single-Detached Units

According to Bourne's taxonomy, processes involved in the modification of existing structures include the intensification or the dilution of occupancy within dwelling units; filtering, or "shifts in the relative quality or value of housing units or groups of units within the housing inventory"; changes in the physical structure of dwelling units such as merger, sub-division and conversion of usage; and "changes in the tenure of occupancy" (Bourne, 1981, p. 27). It is this last process which is of particular interest in studying the single-detached rental sub-market.

Many rented single-detached dwellings in NCAs such as Westminster, Memorial and McMillan were originally built for upper middle-class professionals, while other single-detached dwellings in neighbourhoods such as St. Matthews, Daniel McIntyre and others, housed lower middle-class families (Artibise, 1977). *Postulating a greater tendency for rental tenure among inner-city, lower-income households, it is reasonable to suggest that the conversion of single-detached units from owner-occupied status to rental occupancy often involves some type of filtering process.* Because of the extensive and sometimes heated academic debate surrounding the filtering process, a brief review of this debate is necessary in order to clarify the specific context of its usage in this paper.

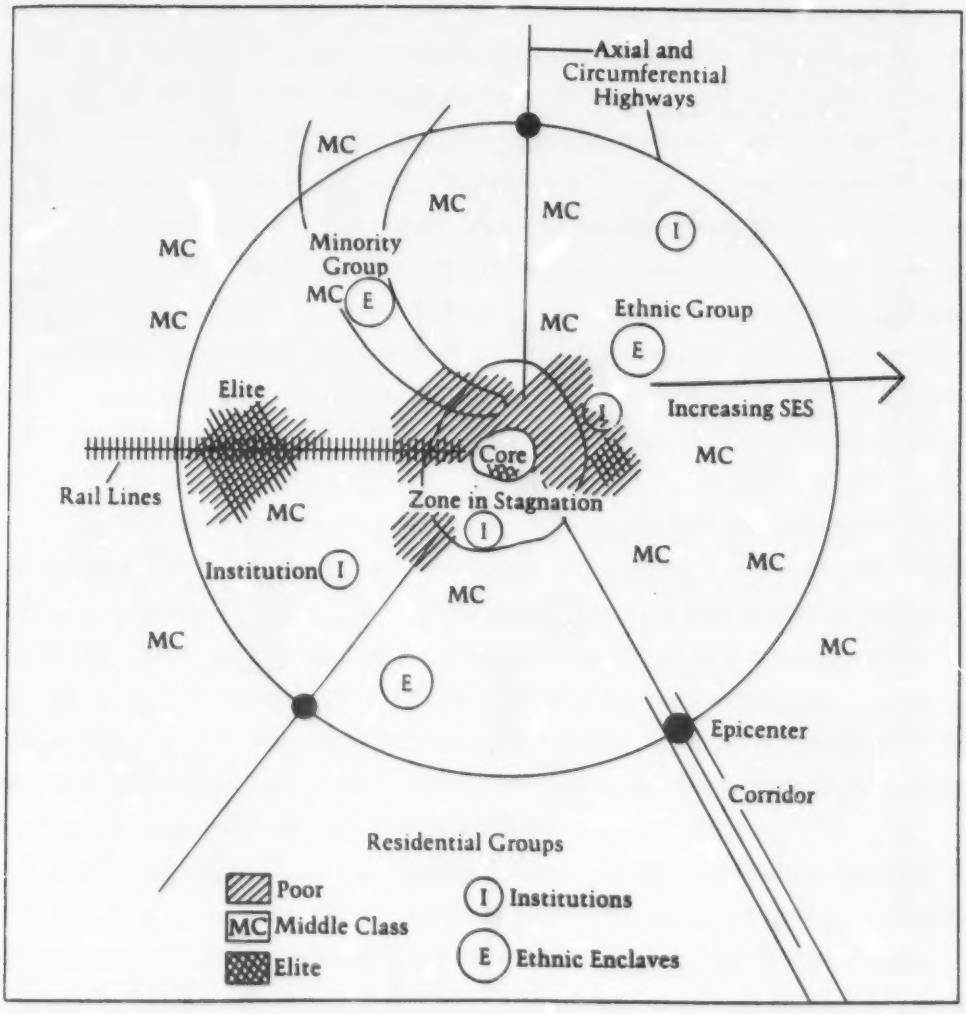
The notion of filtering also originates with the proponents of the "Chicago school" of urban ecology during the 1920s and 1930s. Burgess (1925), in his concentric ring model of urban expansion, suggested that as the city grew, the land use of each concentric zone invaded the next

FIGURE 13 - GENERAL PATTERN OF URBAN LAND VALUES; BRIAN J.L. BERRY (1963)



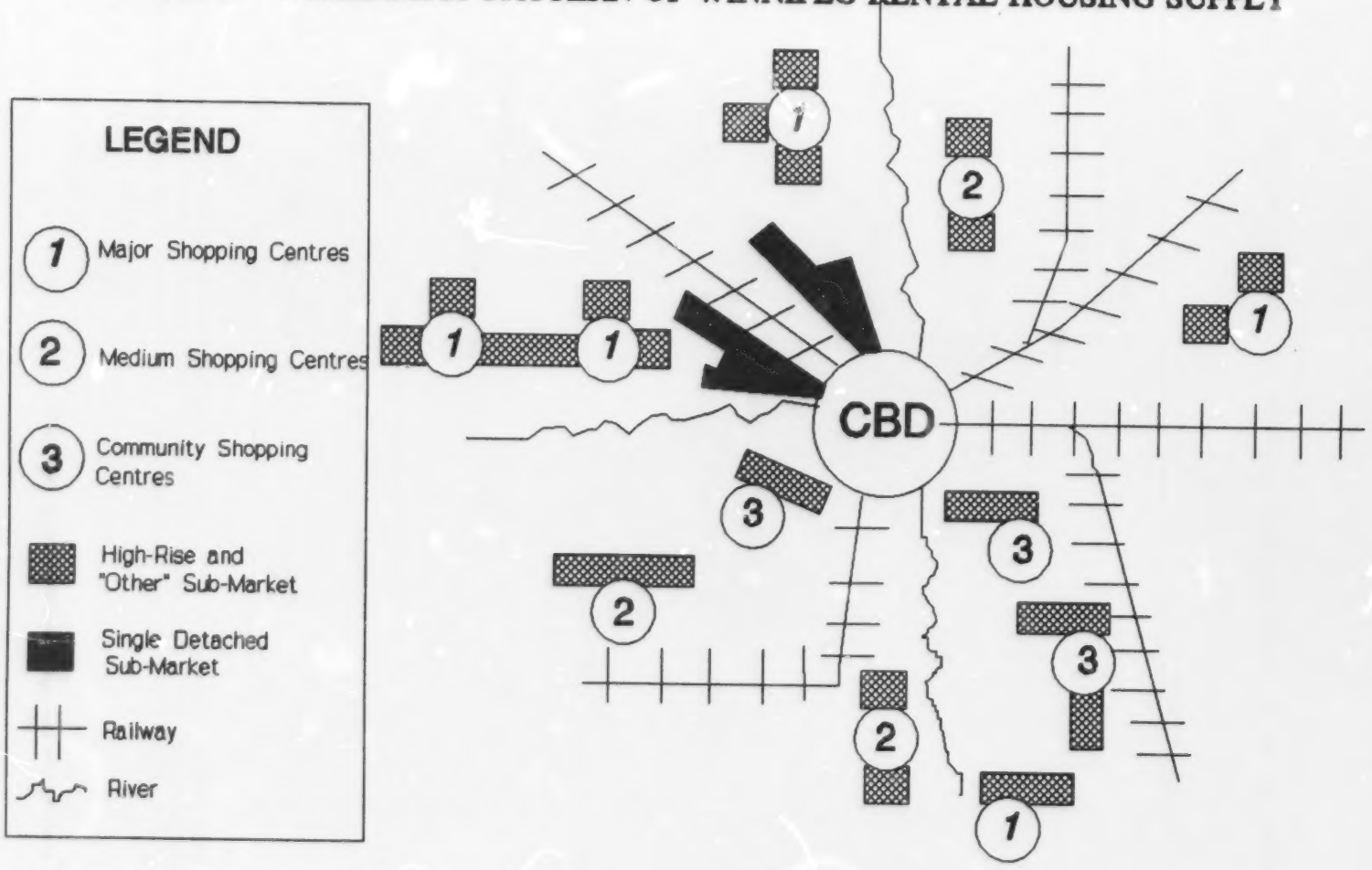
Reproduced from Brian J.L. Berry. "General Features of Urban Commercial Structure" In Larry S. Bourne ed. Internal Structure of the City. New York: Oxford University Press. 1971. (p. 364). Originally published in Brian J.L. Berry. [1963] Commercial Structure and Commercial Blight, Research Paper No. 85, Department of Geography Research Services, University of Chicago, 1963.

FIGURE 14 - THE LATE TWENTIETH CENTURY METROPOLIS; MICHAEL S. WHITE (1987)



Reproduced from the original illustration [White; 1987, p.237]

FIGURE 15 - SCHEMATIC PATTERN OF WINNIPEG RENTAL HOUSING SUPPLY



outer-most zone, in a process he called "succession" (Burgess, 1925, p. 50). The different concentric zones in the model were distinguished not only by industrial and residential land use, but also by the class of residences. The process of succession therefore implied that older dwelling units which were once owned by middle-class individuals would eventually house working class families.

This notion of older middle-class housing becoming occupied by working class households was expanded by Hoyt (1939), who introduced the term "filtering." In Hoyt's model, urban expansion occurred in a sectoral pattern, in which the city's land uses were separated into areas like pieces of a pie, with each sector growing outward at its own rate. One of his major arguments was that the upper-class residential sector grew outward in particular direction, and tended to "pull the growth of the entire city in the same direction" (Hoyt, 1939, in Theodorson, 1982, p. 42). Hoyt felt that the high-priced residences of the "leaders of society" would attract other "lesser income groups" who would try to locate "as close as possible" (Hoyt, 1939, in Theodorson, 1982, p. 42). As the sector of wealthy residents grew outward from the centre of the city, "the lower and intermediate rental groups [would] filter into the homes given up by the higher income groups" (Hoyt, 1939, in Theodorson, 1982, p. 42).

As Bourne (1981) has documented, other writers have added a welfare element to Hoyt's model, suggesting that by moving to the former housing of upper income groups, the welfare of lower income groups is improved. Adding this "trickle-down" notion to the filtering model prompted later writers to declare that filtering was "the principle dynamic feature of the housing market" (Grigsby, 1963, p. 17; quoted by Bourne, 1981, p. 150). Bourne further explains that Grigsby's notion of filtering as a decline in price more rapid than a decline in quality, is rooted in a supply-side perspective, while others have proposed demand-side models, in which households to filter up "to a more preferred bundle of housing services" without a change in income (Bourne, 1981, p. 150).

The growing emphasis on the filtering process has been justified by its need for further explanation, and in many ways, the concept has been separated from its original inspiration, the changing spatial composition of the city. Although various concepts of filtering have been explained and understood, their relation to spatial distribution appears to have been squeezed away by various writers. While the spatial element has been largely set aside in these later models, there remain other problems in measuring "shifts in the relative quality or value of housing units or groups of units within the housing inventory" during periods of volatile real estate prices (Bourne, 1981, p. 27). The result is that the notion of filtering, in its spatial context, has hardly been improved beyond the stage of simple description. In its contrasting form as a normative concept, "filtering is said to work *if and only if* households improve their housing condition, their 'welfare' through the filtering process" (original

italics; Bourne, 1981, p. 153). The problem with this idea is that households are mobile while housing is fixed, and improvements in welfare are therefore very difficult to measure on a spatial basis. Given this discussion of filtering, it is difficult to draw normative conclusions from the analysis of single-detached rental housing, except that further research should avoid catchy terminology which inevitably results in misinterpretation or obfuscation.

8.0 DISCUSSION OF POLICY IMPLICATIONS AND AREAS FOR FUTURE RESEARCH

Rental activity occurred in the vast majority of residential NCAs in Winnipeg, regardless of the structural composition, or period of construction of the rental dwelling units they contained. Rental housing has been a pervasive form of economic activity, not limited by particular ranges of household income, or the more qualitative boundaries of socio-economic class. Although its nature is wide-ranging, rental activity has tended to concentrate in both structural and spatial sub-markets. Most rental activity has occurred in structures containing multiple dwelling units, and these units have tended to concentrate in and around the central business district, and along major roads outside the city centre.

The variations in location, structural type and period of construction have created a highly heterogeneous market for what has been commonly described as a singular shelter alternative. This heterogeneity was underscored by the presence of 11,700 single-detached units, comprising 12.76% of the total 1986 rental market. Most of the single-detached structural sub-market was located in neighbourhoods immediately surrounding the CBD, but were also present in virtually all of Winnipeg's residential suburbs. The identification of such structural and spatial sub-markets raises further questions concerning how they were formed, and how they may change in the future. These behavioral questions remained relatively unexplored, and further research is necessary to explain the processes which shape rental sub-markets and the urban rental market as a whole. The identification and behaviour of sub-markets also yields a number of policy implications for cities, housing agencies, market players and consumers.

As discussed earlier, the temporal scope of this study has been limited to the periods of unit construction, and the study has focused on the spatial and structural constitution of rental sub-markets. While further research is necessary to reveal the nature of underlying processes and their effects on sub-market behaviour, the identification of generalized sub-markets provides an inductive means of sharpening the focus of future research efforts. Considerable work remains in exploring the impact of market forces on rental housing over time. Changes in interest rates, average rents, demographic indicators, and vacancy rates, for example, may have different impacts for various structural and spatial sub-markets. The spatial patterns of land use and other forms of composition within cities have also continued to change rapidly, making it difficult to interpret the underlying processes in effect.

The identification of sub-markets also provides a convenient target for the formation, instrumentation, implementation and evaluation of rental housing policies. For example, the wide

spatial distribution of newer rental unit construction for most structural types suggests a continuing revitalization of existing rental neighbourhoods as well as market expansion into new areas. As a policy objective, however, it may be preferable to direct new construction within established generalized sub-markets, to supplement the existing stock in areas where the greatest market activity is occurring.

Some of the research and policy implications suggested by the study have been outlined below, according to the structural type of rental units. The list is not intended to be comprehensive or fully detailed, but to offer potential directions for new policy objectives and further research.

8.1 "OTHER" UNIT TYPES

In spite of the rapid increase in high-rise construction since 1960, "other" unit types continued to represent the majority of all rental units in the 1986 marketplace. However, *"other" dwelling unit types comprise a continually decreasing proportion of newer unit construction, suggesting a gradual decrease in total market share. This opens the question of how long "other" types will remain dominant in the marketplace, and what impacts an aging stock of "other" units will have on the supply of rental units for older areas of the city.* It may be more economical to replace aging "other" structures with new high-rise construction, but it may also be preferable to encourage renovations of existing structures and single-detached tenure conversions in order to preserve the architectural integrity of neighbourhoods.

Also of concern is the extent to which low-rise, formerly rental units have been converted into condominium units, and whether this trend is expected to continue. Rudimentary observations based on "windshield surveys" and real estate advertisements suggest that *condominium conversions may be concentrated in a few NCAs, most notably McMillan. Further research is needed to confirm which neighbourhoods have been affected by such conversions, and other processes which have effectively removed "other" unit types from the rental marketplace.*

This particular issue underlines one of the major problems in pursuing research and policy for this group: the wide diversity of structures contained within the "other" category. *It is difficult to make more definitive suggestions until further details concerning townhouses, rowhouses, duplexes, triplexes, and various low-rise apartment buildings are revealed in the 1991 census results.* At that time, it may be possible to conduct more detailed analysis of structural and spatial sub-markets pertaining to these units.

8.2 APARTMENT BUILDINGS FIVE STOREYS OR GREATER

As indicated in the analysis, apartment buildings five storeys or greater have captured an increasing share of the total rental market in Winnipeg since 1960, and have been primarily concentrated in the Downtown NCA and in a few suburban neighbourhoods. *As a rapidly growing structural sub-market, further research could be conducted on the influence of long-term financial and demographic trends on the market for high-rise structures.* On a more qualitative note, further research into the roles of zoning regulations, traffic planning, and civic authorities may reveal the influence of "policy communities" in the development of these structures.

It may also be possible to identify unique characteristics among tenants of high-rise apartment units, especially in particular neighbourhoods. If, for example, many of the tenants are senior citizens, there could be implications for the future provision of social services if this group were to "age in place." Also, *since many of these structures were built during the 1960s and 1970s, many will soon be in need of extensive renovations. If these units are allowed to deteriorate, an increased rate of tenant turnover may be created, as well as lower market rents. The policy implications created by these present structures may lend insight into their future problems, especially if they continue to capture an increasing share of new rental unit construction.*

8.3 SINGLE-DETACHED DWELLING UNITS

Single-detached rental units have hardly been recognized as part of the rental market, and no vacancy or price information has been collected for these specific units by CMHC. One of the chief obstacles to collecting such data is the difficulty in identifying these units from the street. An alternative method of identification would be to develop a data base of landlord names using the City of Winnipeg's property assessment files. Individual rented single-detached units could be identified where the address of the taxpayer differs from the address of the property.

Since the rental tenure of these properties is difficult to identify, they may also be unknowingly skipped over by rental property inspectors, unless they have received specific complaints from a tenant. It may be possible that single-detached units are prone to violations of safety standards and other guidelines which regulate the operation of rental housing. It may therefore be necessary to create a detailed and regularly updated database of these units for inspection purposes. The single-detached units themselves may also undergo a faster decline in their physical up-keep and appearance than they would have undergone if they had remained in the ownership market; the rationale being that owner-occupants have a greater psychological and financial stake in their dwelling units than do rental tenants. These questions are very much subject to empirical verification.

Factors which influence the transfer of single-detached units from the ownership market to the rental market remain unclear. If the shift to rental tenure in these units has been relatively recent, it may be related to the decline in low-rise apartment unit construction, or a lack of such units where demand is greatest. Of related interest are the characteristics shared in common by the owners of single-detached rental property. *A landlord questionnaire survey, perhaps distributed with the participation of the Manitoba Landlords Association, would provide further insight into the processes which result in the shifting of single-detached units from the ownership market to the rental market.*

Virtually nothing is known about the residents of single-detached rental units, or how their characteristics may vary from one part of the city to another. *Rented single-detached units may provide a viable housing alternative for those consumers who desire the amenities of a single-detached environment but perhaps cannot afford to carry a mortgage.*

Rented single-detached units may also provide an alternative source of accommodation to groups of unrelated individuals, such as students or other low-income earners. Members of such households may share the benefits of greater household economy, and shelter affordability, than they might otherwise have been able to obtain as single-person or two-person households renting individual apartment units.

Further research in the demand side of the single-detached market may yield answers to these questions. If many of the tenant households in these units have low incomes, these units may signal a potential new area of concern for social housing policy. As a starting point, changes in socio-economic variables over several census periods for NCAs such as Centennial, Westminster, St. Matthews and McMillan, may offer further insight into the development of the single-detached rental sub-market, and point to demand-side variables for more detailed research.

8.4 CONCLUDING REMARKS

This study has adopted a systems approach to studying the supply side of rental markets, and has successfully outlined structural, spatial, and generalized sub-markets of rental housing for the City of Winnipeg in 1986. Further research is required in order to complete a comprehensive analysis of the total market. This work should focus on the demand side of the market, and its interaction with the supply side over time. Efforts should also made to assess the long-term impact of demographic and macroeconomic indicators on the behaviour of urban market variables, such as construction starts, vacancy rates and tenure conversions. The present work has attempted to provide substantive observations, behavioral insights, and a conceptual model for future research into rental housing, as well as a review of the recent supply available in Winnipeg.

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APPENDIX A:

NEIGHBOURHOOD CHARACTERIZATION AREA INDICES

CITY OF WINNIPEG DEPARTMENT OF PLANNING
NEIGHBOURHOOD CHARACTERIZATION AREAS

ALPHABETICAL INDEX

NEIGHBOURHOOD	CODE
AGASSIZ	6.10
AIRPORT	2.19
ALPINE PLACE	5.04
ARCHWOOD	5.05
ARMSTRONG POINT	1.19
ASSINIBOINE	1.89 *
BEAUMONT	6.02
BETSWORTH	6.33
BIRCHWOOD	2.07
BOOTH	2.08
BROADWAY	1.88 *
BROOKLANDS	2.02
BRUCE PARK	2.04
BUCHANAN	2.09
BURROWS CENTRAL	3.03
BURROWS KEEWATIN	3.07
CANTERBURY PARK	4.14
CEN ST. BONIFACE	5.02
CENTENNIAL	1.02
CENTRAL PARK	1.94 *
CENTRAL RIVER H.	6.11
CHALMERS	4.01
CHEVRIER	6.53
CHINATOWN	1.83 *
CLOUTIER DRIVE	6.35
CRESCENT PARK	6.12
CRESCENTWOOD	6.01
CRESTVIEW	2.10
DAKOTA CROSSING	5.30
DANIEL MCINTYRE	1.08
DEER LODGE	2.05
DOWNTOWN	1.20
DUFFERIN	3.01
DUFFERIN INDUS.	3.28
DUFRESNE	5.06
EARL GREY	1.06
EAST ELMWOOD	4.05
EBBY WENTWORTH	1.07
EDGELAND	6.13
ELM PARK	5.07
ELMHURST	6.36
ERIC COY	6.14
EXCHANGE DIST.	1.81 *

NEIGHBOURHOOD	CODE
FAIRFIELD PARK	6.37
FORT RICHMOND	6.15
FORT WHYTE	6.03
GARDEN CITY	3.16
GLENDALE	2.11
GLENWOOD	5.08
GRANT PARK	6.04
GRASSIE	4.24
HERITAGE PARK	2.12
HOLDEN	5.09
INKSTER FARADAY	3.08
INKSTER GARDENS	3.19
INKSTER INDUS PK	3.29
ISLAND LAKES	5.46
J. B. MITCHELL	6.16
JAMESWOOD	2.13
JEFFERSON	3.09
KENSINGTON	2.01
KERN PARK	4.06
KILCONA PARK	4.27
KILDARE REDONDA	4.10
KILDONAN DRIVE	4.11
KING EDWARD	2.03
KINGSTON CRES.	5.18
KIRKFIELD	2.16
LA BARRIERE	6.57
LAVALEE	5.10
LEILA MCPHILLIPS	3.20
LEILA NORTH	3.26
LINDEN WOODS	6.34
LOGAN CPR	1.01
LORD ROBERTS	1.09
LORD SELKIRK PK.	3.04
LUXTON	3.05
MAGINOT	5.11
MANDALAY WEST	3.21
MARGARET PARK	3.18
MARLTON	6.17
MATHERS	6.18
MAYBANK	6.05
MCMILLAN	1.10
MEADOWOOD	5.26
MEADOWS	4.15
MELROSE	4.02
MEMORIAL	1.03
MINNETONKA	5.19
MINTO	1.15
MISSION GARDENS	4.16
MONTCALM	6.40
MUNROE EAST	4.12

NEIGHBOURHOOD	CODE
MUNROE WEST	4.07
MYNARSKI	3.10
N. HEADINGLEY	2.18
N. PERIMETER W.	2.23
N. POINT DOUGLAS	3.11
N. ST. BONIFACE	5.01
NIAKWA PARK	5.20
NORBERRY	5.12
NORTH PORTAGE	1.92 •
NORTH RIVER HEI.	6.20
NORWOOD EAST	5.13
NORWOOD WEST	5.14
OLD TUXEDO	6.21
PADDOCK	2.06
PARC LA SALLE	6.42
PEGUIS	4.17
PEMBINA STRIP	6.43
POINT ROAD	6.06
POLO PARK	1.22
PULBERRY	5.21
RADISSON	4.08
RICHFIELD	5.28
RICHMOND LAKES	6.41
RICHMOND WEST	6.38
RIDGEDALE	6.22
RIDGEWOOD SOUTH	6.49
RIVER EAST	4.18
RIVER OSBORNE	1.11
RIVER PARK SOUTH	5.29
RIVERBEND	3.23
RIVERGROVE	3.22
RIVERVIEW	1.16
RIVERWEST PARK	6.23
ROBERTSON	3.12
ROBLIN PARK	6.24
ROCKWOOD	6.07
ROSLYN	1.17
ROSSER O. KILDON	3.35
ROSSMERE A	4.13
ROSSMERE B	4.34
S. HEADINGLEY	6.44
S. JOHN FRANKLIN	6.26
S. POINT DOUGLAS	1.23
SARGENT PARK	1.18
SEVEN OAKS	3.14
SHAUGHNESSY PARK	3.15
SILVER HEIGHTS	2.15
SOUTH PERIMETER	6.59
SOUTH PORTAGE	1.86 •
SOUTH RIVER HEI.	6.28

NEIGHBOURHOOD	CODE
SOUTH TUXEDO	6.45
SOUTHBOINE	6.27
SOUTHDALE	5.22
SPENCE	1.04
SPRINGFIELD NOR.	4.19
SPRINGFIELD SOU.	4.20
ST. BONIFACE REF	5.38
ST. GEORGE	5.15
ST. JOHNS	3.06
ST. JOHNS PARK	3.13
ST. MATTHEWS	1.12
ST. NORBERT	6.25
ST. VITAL PER. S	5.43
STURGEON CREEK	2.14
TALBOT GREY	4.03
TEMPLETON SINCLA	3.24
THE MAPLES	3.17
TISSOT	5.03
TRANSCONA SOUTH	4.25
TRAPPISTES	6.50
TUXEDO	6.19
TYNDALL PARK	3.25
UNIVERSITY	6.56
VALHALLA	4.21
VALLEY GARDENS	4.22
VALLEY GARDENS A	4.23
VARENNES	5.16
VARSITY VIEW	6.08
VIALOUX	6.30
VICTORIA CRES.	5.23
VICTORIA WEST	4.04
VISTA	5.24
W. ALEXANDER	1.05
WAVERLEY HEIGHTS	6.46
WELLINGTON CRES.	6.31
WEST ELMWOOD	4.09
WESTDALE	6.32
WESTMINSTER	1.13
WESTON	1.14
WESTWOOD	2.24
WILDWOOD	6.09
WILKES SOUTH	6.58
WILLIAM WHYTE	3.02
WINDSOR PARK	5.25
WOODHAVEN	2.17
WORTHINGTON	5.17
YORK	1.87 *

* These characterization areas, in combination with a few non-residential areas such as the legislature, form the downtown NCA (Number 1.20).

CITY OF WINNIPEG DEPARTMENT OF PLANNING
NEIGHBOURHOOD CHARACTERIZATION AREAS

NUMERIC INDEX

CODE	NEIGHBOURHOOD
1.01	LOGAN CPR
1.02	CENTENNIAL
1.03	MEMORIAL
1.04	SPENCE
1.05	W. ALEXANDER
1.06	EARL GREY
1.07	EBBY WENTWORTH
1.08	DANIEL MCINTYRE
1.09	LORD ROBERTS
1.10	MCMILLAN
1.11	RIVER OSBORNE
1.12	ST. MATTHEWS
1.13	WESTMINSTER
1.14	WESTON
1.15	MINTO
1.16	RIVERVIEW
1.17	ROSLYN
1.18	SARGENT PARK
1.19	ARMSTRONG POINT
1.20	DOWNTOWN
1.22	POLO PARK
1.23	S. POINT DOUGLAS *
1.81	EXCHANGE DIST. *
1.83	CHINATOWN *
1.86	SOUTH PORTAGE *
1.87	YORK *
1.88	BROADWAY *
1.89	ASSINIBOINE *
1.92	NORTH PORTAGE *
1.94	CENTRAL PARK *
2.01	KENSINGTON
2.02	BROOKLANDS
2.03	KING EDWARD
2.04	BRUCE PARK
2.05	DEER LODGE
2.06	PADDOCK
2.07	BIRCHWOOD
2.08	BOOTH
2.09	BUCHANAN
2.10	CRESTVIEW
2.11	GLENDALE
2.12	HERITAGE PARK
2.13	JAMESWOOD
2.14	STURGEON CREEK
2.15	SILVER HEIGHTS

CODE	NEIGHBOURHOOD
2.16	KIRKFIELD
2.17	WOODHAVEN
2.18	N. HEADINGLEY
2.19	AIRPORT
2.23	N. PERIMETER W.
2.24	WESTWOOD
3.01	DUFFERIN
3.02	WILLIAM WHYTE
3.03	BURROWS CENTRAL
3.04	LORD SELKIRK PK.
3.05	LUXTON
3.06	ST. JOHNS
3.07	BURROWS KEEWATIN
3.08	INKSTER FARADAY
3.09	JEFFERSON
3.10	MYNARSKI
3.11	N. POINT DOUGLAS
3.12	ROBERTSON
3.13	ST. JOHNS PARK
3.14	SEVEN OAKS
3.15	SHAUGHNESSY PARK
3.16	GARDEN CITY
3.17	THE MAPLES
3.18	MARGARET PARK
3.19	INKSTER GARDENS
3.20	LEILA MCPHILLIPS
3.21	MANDALAY WEST
3.22	RIVERGROVE
3.23	RIVERBEND
3.24	TEMPLETON SINCLA
3.25	TYNDALL PARK
3.26	LEILA NORTH
3.28	DUFFERIN INDUS.
3.29	INKSTER INDUS PK
3.35	ROSSER O. KILDON
4.01	CHALMERS
4.02	MELROSE
4.03	TALBOT GREY
4.04	VICTORIA WEST
4.05	EAST ELMWOOD
4.06	KERN PARK
4.07	MUNROE WEST
4.08	RADISSON
4.09	WEST ELMWOOD
4.10	KILDARE REDONDA
4.11	KILDONAN DRIVE
4.12	MUNROE EAST
4.13	ROSSMERE A
4.14	CANTERBURY PARK
4.15	MEADOWS

CODE	NEIGHBOURHOOD
4.16	MISSION GARDENS
4.17	PEGUIS
4.18	RIVER EAST
4.19	SPRINGFIELD NOR.
4.20	SPRINGFIELD SOU.
4.21	VALHALLA
4.22	VALLEY GARDENS
4.23	VALLEY GARDENS A
4.24	GRASSIE
4.25	TRANSCONA SOUTH
4.27	KIL CONA PARK
4.34	ROSSMERE B
5.01	N. ST. BONIFACE
5.02	CEN ST. BONIFACE
5.03	TISSOT
5.04	ALPINE PLACE
5.05	ARCHWOOD
5.06	DUFRESNE
5.07	ELM PARK
5.08	GLENWOOD
5.09	HOLDEN
5.10	LAVALEE
5.11	MAGINOT
5.12	NORBERRY
5.13	NORWOOD EAST
5.14	NORWOOD WEST
5.15	ST. GEORGE
5.16	VARENNES
5.17	WORTHINGTON
5.18	KINGSTON CRES.
5.19	MINNETONKA
5.20	NIAKWA PARK
5.21	PULBERRY
5.22	SOUTHDALE
5.23	VICTORIA CRES.
5.24	VISTA
5.25	WINDSOR PARK
5.26	MEADOWOOD
5.28	RICHFIELD
5.29	RIVER PARK SOUTH
5.30	DAKOTA CROSSING
5.38	ST. BONIFACE REF
5.43	ST. VITAL PER. S
5.46	ISLAND LAKES
6.01	CRESCENTWOOD
6.02	BEAUMONT
6.03	FORT WHYTE
6.04	GRANT PARK
6.05	MAYBANK
6.06	POINT ROAD

CODE	NEIGHBOURHOOD
6.07	ROCKWOOD
6.08	VARSITY VIEW
6.09	WILDWOOD
6.10	AGASSIZ
6.11	CENTRAL RIVER H.
6.12	CRESCENT PARK
6.13	EDGELAND
6.14	ERIC COY
6.15	FORT RICHMOND
6.16	J. B. MITCHELL
6.17	MARLTON
6.18	MATHERS
6.19	TUXEDO
6.20	NORTH RIVER HEI.
6.21	OLD TUXEDO
6.22	RIDGEDALE
6.23	RIVERWEST PARK
6.24	ROBLIN PARK
6.25	ST. NORBERT
6.26	S. JOHN FRANKLIN
6.27	SOUTHBOINE
6.28	SOUTH RIVER HEI.
6.30	VIALOUX
6.31	WELLINGTON CRES.
6.32	WESTDALE
6.33	BETSWORTH
6.34	LINDEN WOODS
6.35	CLOUTIER DRIVE
6.36	ELMHURST
6.37	FAIRFIELD PARK
6.38	RICHMOND WEST
6.40	MONTCALM
6.41	RICHMOND LAKES
6.42	PARC LA SALLE
6.43	PEMBINA STRIP
6.44	S. HEADINGLEY
6.45	SOUTH TUXEDO
6.46	WAVERLEY HEIGHTS
6.49	RIDGEWOOD SOUTH
6.50	TRAPPISTES
6.53	CHEVRIER
6.56	UNIVERSITY
6.57	LA BARRIERE
6.58	WILKES SOUTH
6.59	SOUTH PERIMETER

* These characterization areas, in combination with a few non-residential areas such as the legislature, form the Downtown NCA (Number 1.20).

CITY OF WINNIPEG DEPARTMENT OF PLANNING
NEIGHBOURHOOD CHARACTERIZATION AREAS

LOCATED BEYOND THE URBAN LIMIT LINE (ULL)

NEIGHBOURHOOD	CODE
NORTH HEADINGLY	2.18
NORTH PERIMETER WEST	2.23
ROSSER OLD KILDONAN	3.35
TRAPPISTES	6.50
SOUTH PERIMETER WEST	6.59
SOUTH HEADINGLY	6.44
GRANGE	6.39
SASKATCHEWAN NORTH	2.22
WILKES SOUTH	6.58
WAVERLEY WEST	6.51
LA BARRIERE	6.57
ST. VITAL PERIMETER SOUTH	5.43
TRANSONA SOUTH	4.25

CITY OF WINNIPEG DEPARTMENT OF PLANNING
NEIGHBOURHOD CHARACTERIZATION AREAS

WITHIN THE URBAN LIMIT LINE
WHICH WERE PREDOMINANTLY NON-RESIDENTIAL
BUT CONTAINED SOME OCCUPIED RESIDENTIAL DWELLINGS
(1986 CENSUS)

NEIGHBOURHOOD	CODE	DWELLINGS
LOGAN CPR	1.01	65
AIRPORT	2.19	105
LEILA NORTH	3.26	40
DUFFERIN INDUSTRIAL	3.28	65
INKSTER INDUSTRIAL	3.29	85
KIL CONA PARK	4.27	80
ST. BONIFACE REFINERY	5.38	45
CHEVRIER	6.53	65
UNIVERSITY	6.56	75
SOUTH POINT DOUGLAS	1.23	110

CITY OF WINNIPEG DEPARTMENT OF PLANNING
NEIGHBOURHOOD CHARACTERIZATION AREAS

WITHIN THE URBAN LIMIT LINE
WHICH WERE RESIDENTIAL
BUT CONTAINED LESS THAN 100 OCCUPIED RESIDENTIAL DWELLINGS
(1986 CENSUS)

NEIGHBOURHOOD	CODE	DWELLINGS
PEGUIS	4.17	70
VALLEY GARDENS ANNEX	4.23	85
GRASSIE	4.24	65
FORT WHYTE	6.03	45
FAIRFIELD PARK	6.37	30
RIDGEWOOD SOUTH	6.49	50

CITY OF WINNIPEG DEPARTMENT OF PLANNING
NEIGHBOURHOOD CHARACTERIZATION AREAS

WITHIN THE URBAN LIMIT LINE
WHICH WERE PREDOMINANTLY NON-RESIDENTIAL
AND CONTAINED NO RESIDENTIAL DWELLINGS
(1986 CENSUS)

NEIGHBOURHOOD	CODE
ASSINIBOINE PARK	6.60
MURRAY INDUSTRIAL PARK	2.20
ST. JAMES INDUSTRIAL	2.21
OAK POINT HIGHWAY	3.31
VOPNI	3.32
PACIFIC INDUSTRIAL	1.21
WESTON SHOPS	3.34
BROOKSIDE	3.27 (also called NORTH INKSTER INDUSTRIAL)
WEST KILDONAN INDUSTRIAL	3.33
MCLEOD INDUSTRIAL	4.28
GRIFFIN	4.26
REGENT	4.33
TYNE TEES	4.32
MISSION	5.36
DUGALD	5.34
STOCKYARDS	5.39
ST. BONIFACE INDUSTRIAL PARK	5.37
SYMINGTON YARDS	5.40
THE MINT	5.41
TRANSCONA YARDS	4.31
WHYTE RIDGE INDUSTRIAL	6.61
BUFFALO	6.52
LORD SELKIRK INDUSTRIAL	3.30
TUXEDO INDUSTRIAL	6.55
OMAND'S CREEK INDUSTRIAL	2.25

APPENDIX B:

1986 RENTAL MARKET TABLES FOR THE CITY OF WINNIPEG

APPENDIX B - TABLE ONE: 1986 CITY OF WINNIPEG OCCUPIED PRIVATE DWELLING UNITS; ALL STRUCTURAL TYPES BY PERIOD OF CONSTRUCTION BY TENURE

PERIOD OF CONSTRUCTION	TOTAL		OWNED			RENTED		
	RAW DATA	COLUMN %	RAW DATA	COLUMN %	ROW %	RAW DATA	COLUMN %	ROW %
ALL PERIODS	226,755		135,060		59.56%	91,695		40.44%
1920 OR EARLIER	19,150	8.45%	13,385	9.91%	69.90%	5,760	6.28%	30.08%
1921 - 1945	32,315	14.25%	21,510	15.93%	66.56%	10,810	11.79%	33.45%
1946 - 1960	52,630	23.21%	37,590	27.83%	71.42%	15,045	16.41%	28.59%
1961 - 1970	44,165	19.48%	22,370	16.56%	50.65%	21,800	23.77%	49.36%
1971 - 1980	60,070	26.49%	29,015	21.48%	48.30%	31,055	33.87%	51.70%
1981 - 1986	18,425	8.13%	11,195	8.29%	60.76%	7,230	7.88%	39.24%

Source: IUS/SPC Special Tabulations of 1986 Census Data; PO #3019 Table 35, Page 200.

APPENDIX B - TABLE TWO: 1986 CITY OF WINNIPEG OCCUPIED PRIVATE DWELLINGS; TYPE BY PERIOD OF SINGLE-DETACHED UNITS SHOWING PERIOD OF CONSTRUCTION BY TENURE

PERIOD OF CONSTRUCTION	TOTAL		OWNED			RENTED		
	RAW DATA	COLUMN %	RAW DATA	COLUMN %	ROW %	RAW DATA	COLUMN %	ROW %
ALL PERIODS	132,695		120,995		91.18%	11,700		8.82%
1920 OR EARLIER	13,755	10.37%	12,385	10.24%	90.04%	1,365	11.67%	9.92%
1921 - 1945	24,060	18.13%	20,375	16.84%	84.68%	3,685	31.50%	15.32%
1946 - 1960	39,910	30.08%	36,065	29.81%	90.37%	3,840	32.82%	9.62%
1961 - 1970	20,825	15.69%	19,490	16.11%	93.59%	1,330	11.37%	6.39%
1971 - 1980	23,165	17.46%	22,105	18.27%	95.42%	1,060	9.06%	4.58%
1981 - 1986	10,985	8.28%	10,575	8.74%	96.27%	410	3.50%	3.73%

Source: IUS/SPC Special Tabulations of 1986 Census Data; PO #3019 Table 35, Page 200.

APPENDIX B - TABLE THREE: 1986 CITY OF WINNIPEG OCCUPIED PRIVATE DWELLING UNITS; IN APARTMENT BUILDINGS FIVE STOREYS OR GREATER BY PERIOD OF CONSTRUCTION BY TENURE

PERIOD OF CONSTRUCTION	TOTAL		OWNED			RENTED		
	RAW DATA	COLUMN %	RAW DATA	COLUMN %	ROW %	RAW DATA	COLUMN %	ROW %
ALL PERIODS	30,115		2,120		7.04%	27,990		92.94%
1920 OR EARLIER	375	1.25%	70	3.30%	18.67%	305	1.09%	81.33%
1921 - 1945	310	1.03%	65	3.07%	20.97%	245	0.88%	79.03%
1946 - 1960	1,760	5.84%	145	6.84%	8.24%	1,620	5.79%	92.05%
1961 - 1970	9,635	31.99%	735	34.67%	7.63%	8,900	31.80%	92.37%
1971 - 1980	14,465	48.03%	1,010	47.64%	6.98%	13,450	48.05%	92.98%
1981 - 1986	3,580	11.89%	100	4.72%	2.79%	3,480	12.43%	97.21%

Source: IUS/SPC Special Tabulations of 1986 Census Data; PO #3019 Table 35, Page 200.

APPENDIX B - TABLE FOUR: 1986 CITY OF WINNIPEG OCCUPIED PRIVATE DWELLING UNITS; IN "OTHER" STRUCTURAL TYPES BY PERIOD OF CONSTRUCTION BY TENURE

PERIOD OF CONSTRUCTION	TOTAL		OWNED			RENTED		
	RAW DATA	COLUMN %	RAW DATA	COLUMN %	ROW %	RAW DATA	COLUMN %	ROW %
ALL PERIODS	63,830		11,855		18.57%	51,970		81.42%
1920 OR EARLIER	5,025	7.87%	935	7.89%	18.61%	4,090	7.87%	81.39%
1921 - 1945	7,950	12.45%	1,075	9.07%	13.52%	6,875	13.23%	86.48%
1946 - 1960	10,960	17.17%	1,380	11.64%	12.59%	9,580	18.43%	87.41%
1961 - 1970	13,690	21.45%	2,125	17.92%	15.52%	11,560	22.24%	84.44%
1971 - 1980	22,355	35.02%	5,835	49.22%	26.10%	16,520	31.79%	73.90%
1981 - 1986	3,855	6.04%	505	4.26%	13.10%	3,340	6.43%	86.64%

Source: IUS/SPC Special Tabulations of 1986 Census Data; PO #3019 Table 35, Page 200.

APPENDIX B - TABLE FIVE: WINNIPEG RENTAL HOUSING SUPPLY 1986 - STRUCTURAL TYPES BY PERIOD OF CONSTRUCTION*

PERIOD OF CONSTRUCTION	ALL TYPES		SINGLE DETACHED			APARTMENTS 5+ STOREYS			"OTHER" TYPES		
	DWELLING UNITS	COLUMN PERCENT	DWELLING UNITS	COLUMN PERCENT	ROW PERCENT	DWELLING UNITS	COLUMN PERCENT	ROW PERCENT	DWELLING UNITS	COLUMN PERCENT	ROW PERCENT
ALL PERIODS	91,695		11,700		12.76%	27,990		30.53%	51,970		56.68%
1920 OR EARLIER	5,760	6.28%	1,365	11.67%	23.70%	305	1.09%	5.30%	4,090	7.87%	71.01%
1921 - 1945	10,810	11.79%	3,685	31.50%	34.09%	245	0.88%	2.27%	6,875	13.23%	63.60%
1946 - 1960	15,045	16.41%	3,840	32.82%	25.52%	1,620	5.79%	10.77%	9,580	18.43%	63.68%
1961 - 1970	21,800	23.77%	1,330	11.37%	6.10%	8,900	31.80%	40.83%	11,560	22.24%	53.03%
1971 - 1980	31,055	33.87%	1,060	9.06%	3.41%	13,450	48.05%	43.31%	16,520	31.79%	53.20%
1981 - 1986	7,230	7.88%	410	3.50%	5.67%	3,480	12.43%	48.13%	3,340	6.43%	46.20%

Source: Institute of Urban Studies/Social Planning Council of Winnipeg Cross-Tabulation of 1986 Census Data; P0 3019, Table 35.

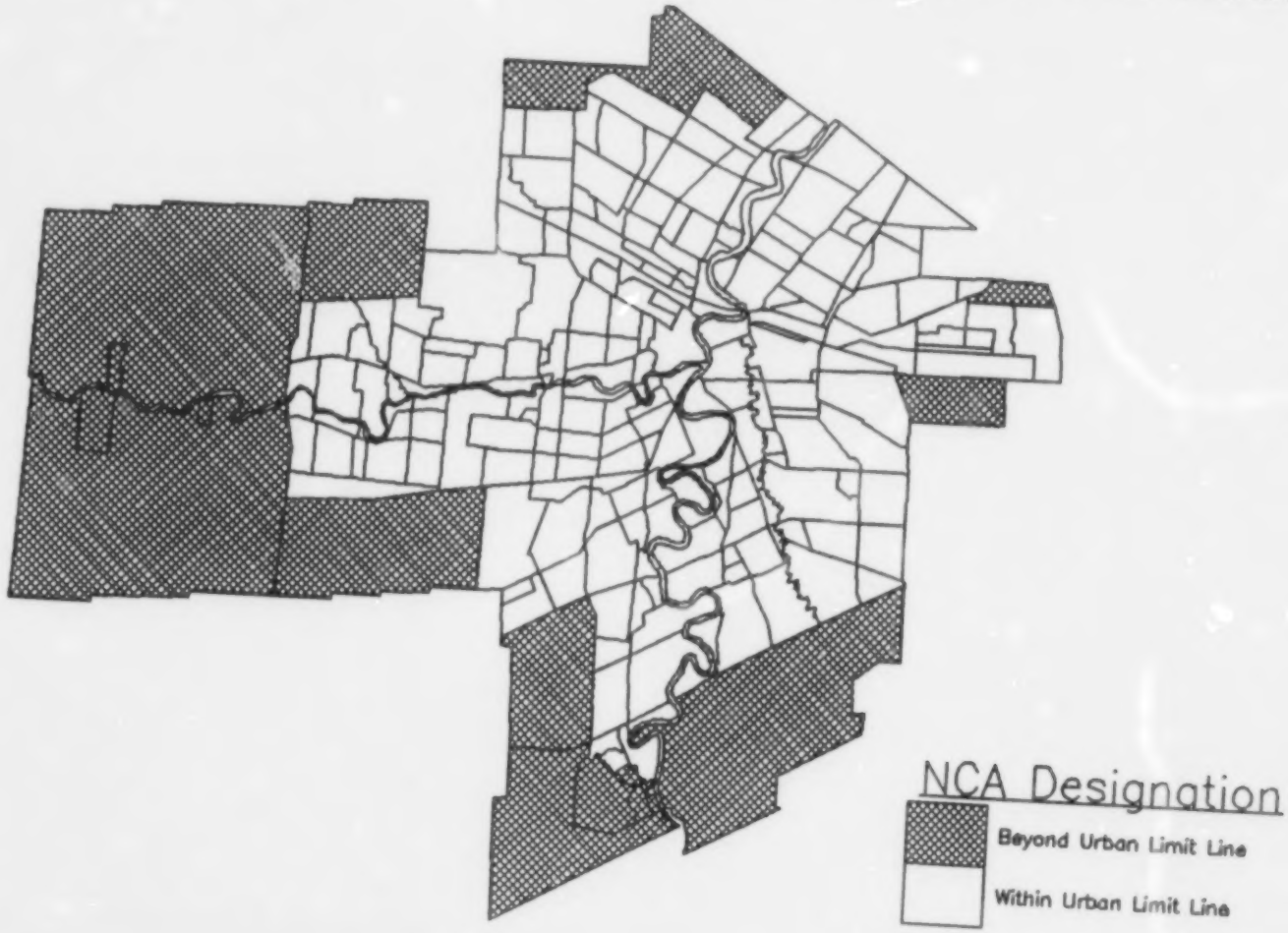
* Figures may not add to 100% due to rounding.

APPENDIX C

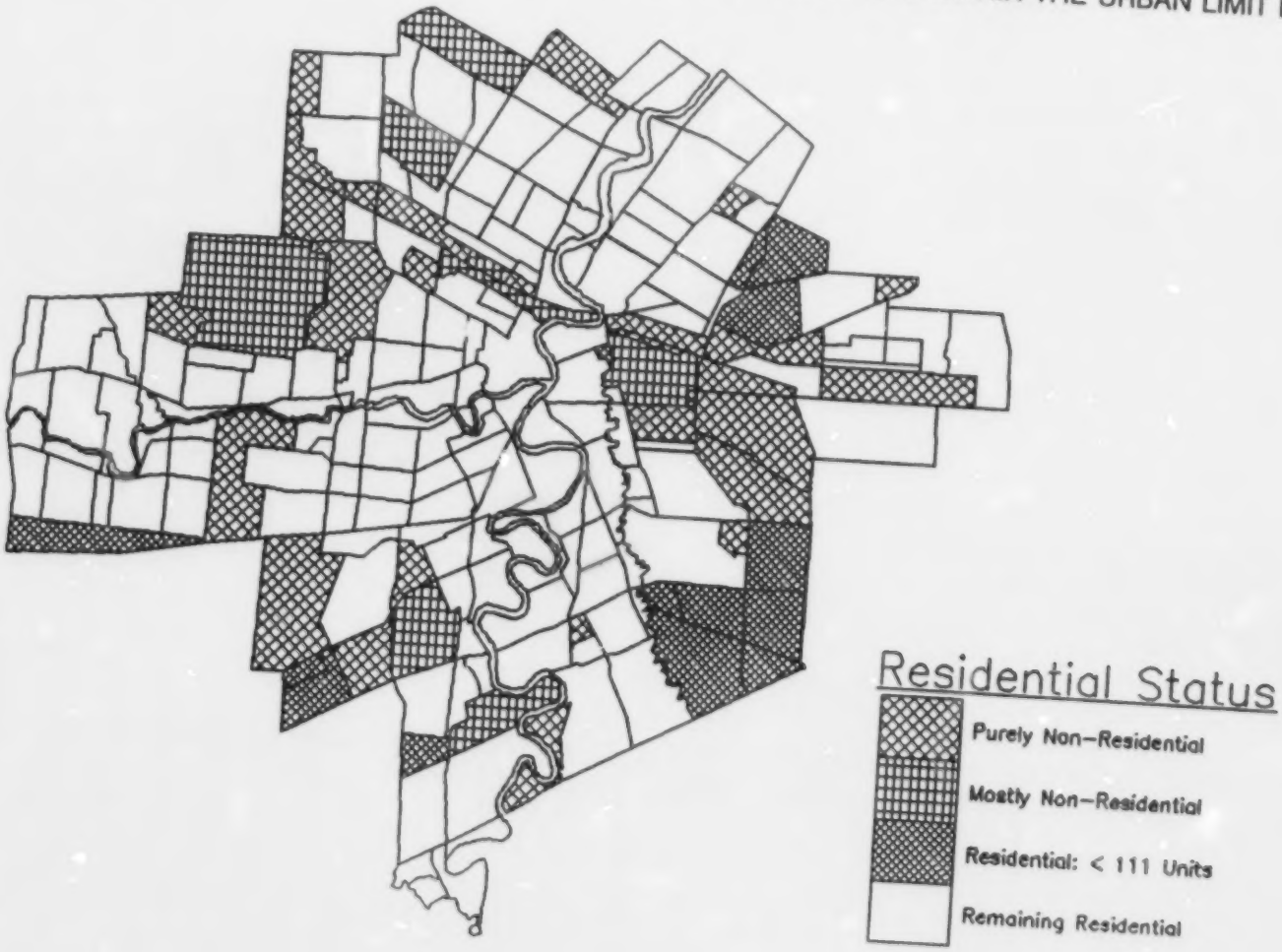
MAPS

MAP 1 - CITY OF WINNIPEG NEIGHBOURHOOD CHARACTERIZATION AREAS (NCAS)

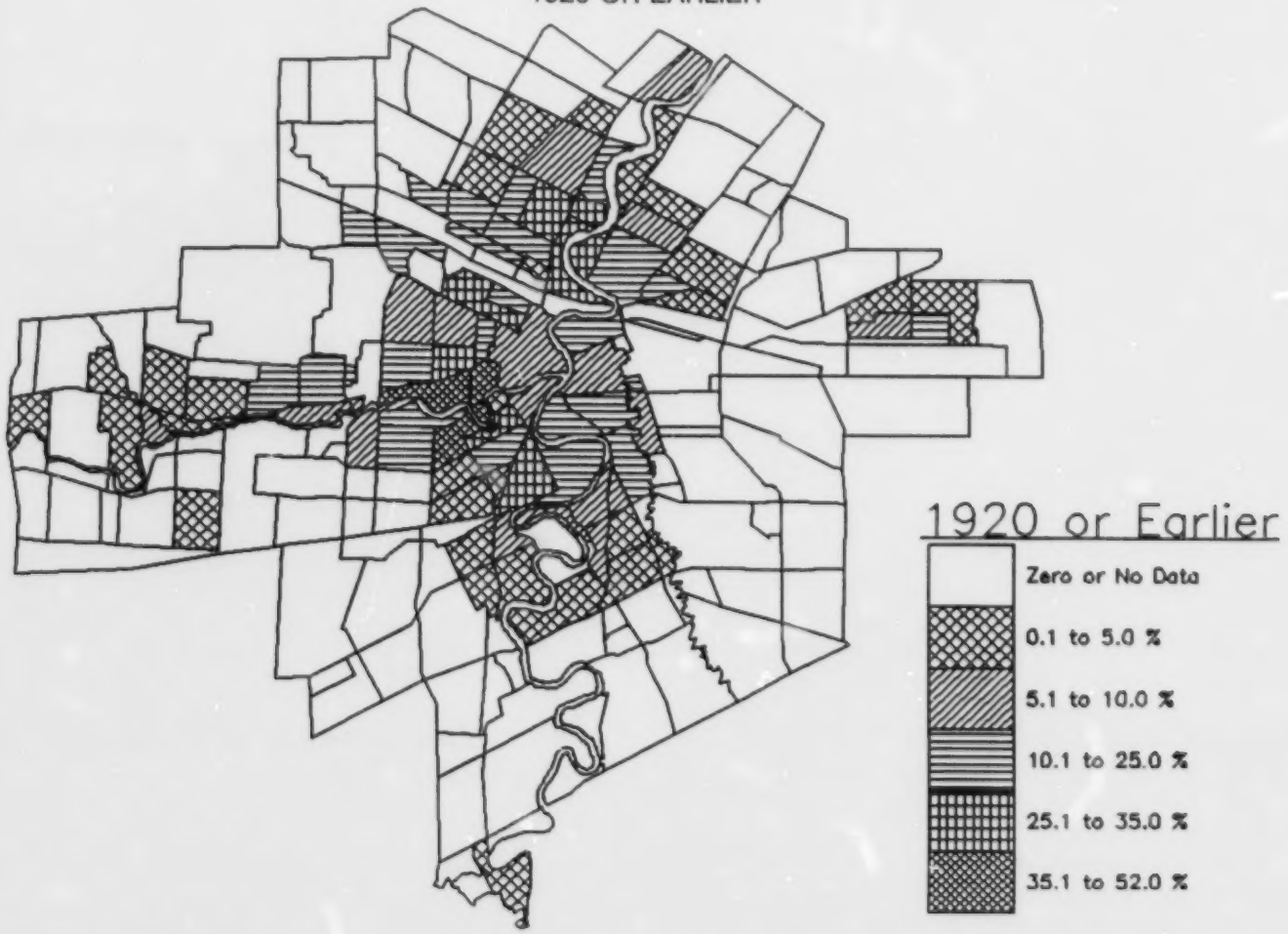
MAP 2 - WINNIPEG RENTAL HOUSING MARKET 1986:
CITY OF WINNIPEG NEIGHBOURHOOD CHARACTERIZATION AREAS BEYOND THE URBAN LIMIT LINE (ULL)



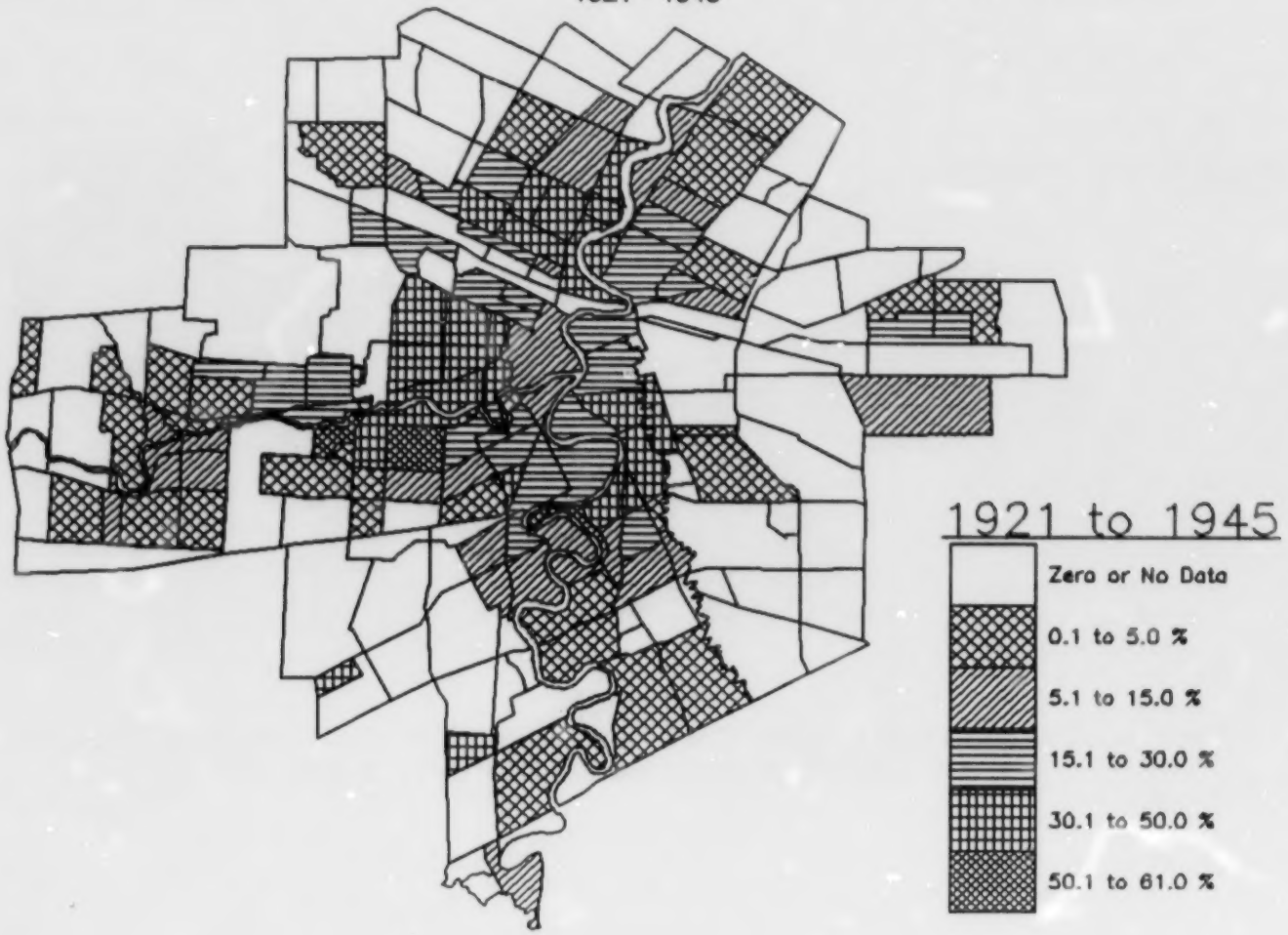
MAP 3 - WINNIPEG RENTAL HOUSING MARKET 1986:
RESIDENTIAL STATUS OF NEIGHBOURHOOD CHARACTERIZATION AREAS WITHIN THE URBAN LIMIT LINE (ULL)



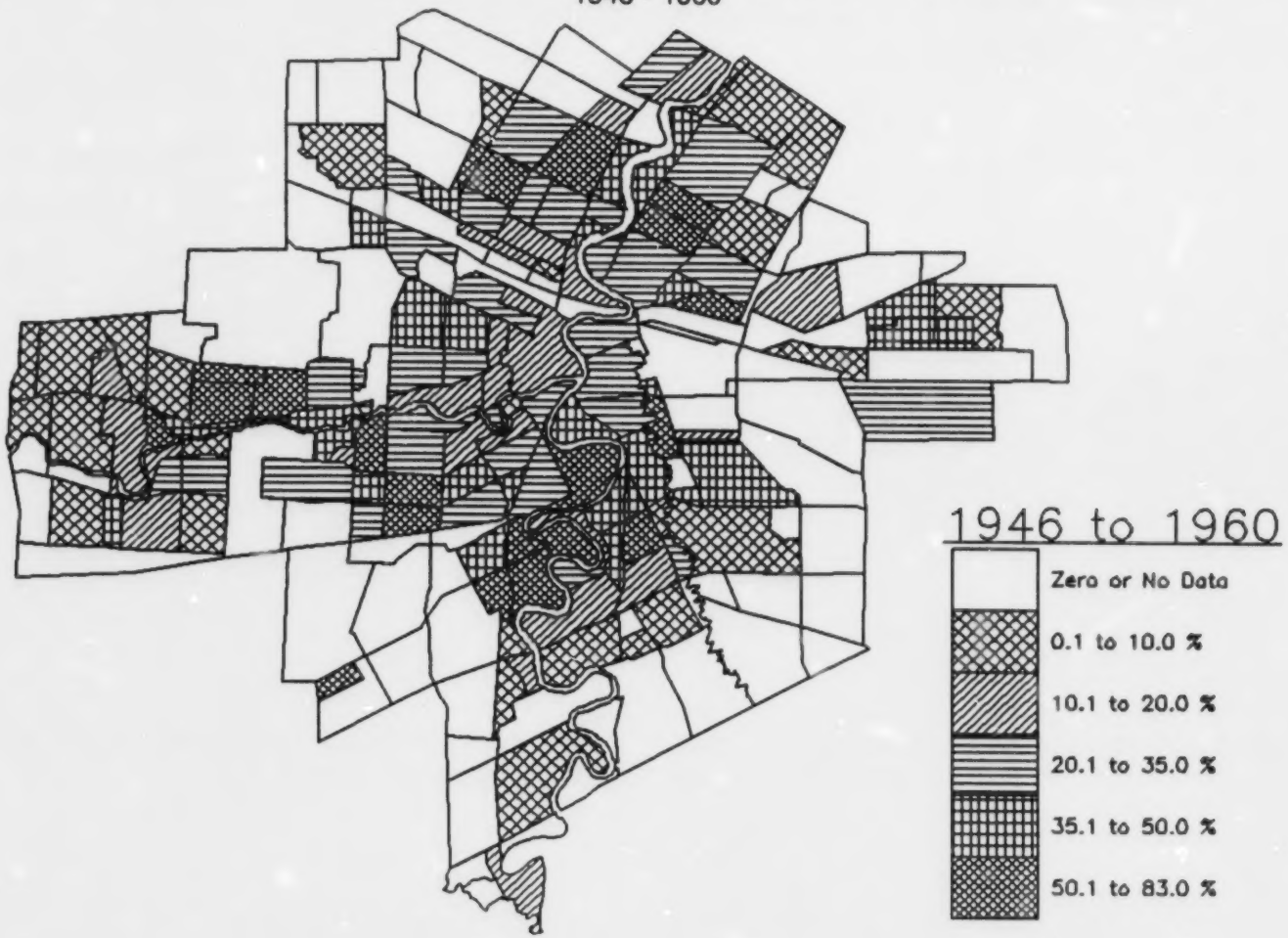
MAP 4 - WINNIPEG RENTAL HOUSING MARKET 1986:
TOTAL OCCUPIED DWELLING UNITS, ALL STRUCTURAL TYPES, PROPORTION BY PERIOD OF CONSTRUCTION;
1920 OR EARLIER



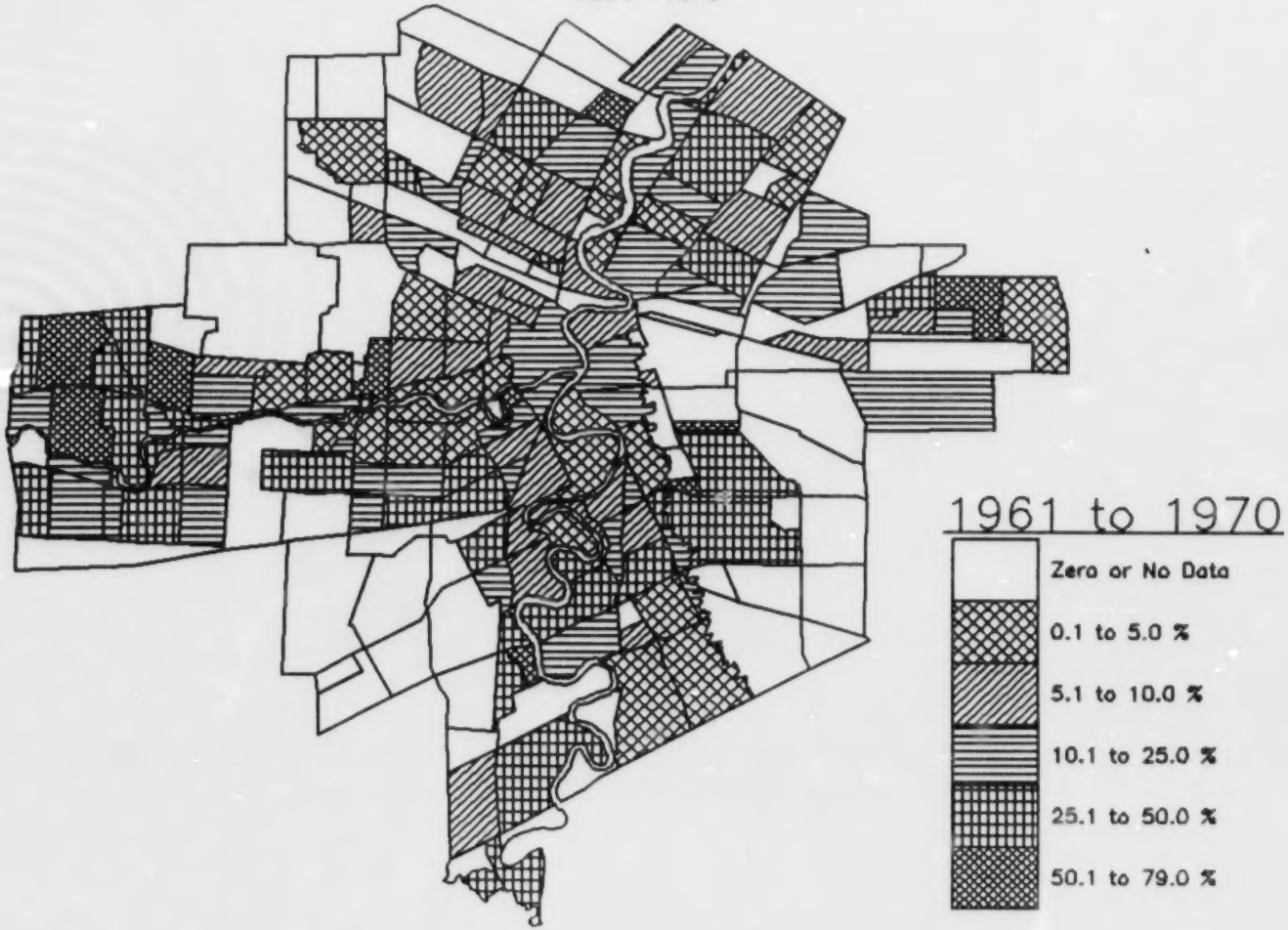
MAP 5 - WINNIPEG RENTAL HOUSING MARKET 1986:
TOTAL OCCUPIED DWELLING UNITS, ALL STRUCTURAL TYPES, PROPORTION BY PERIOD OF CONSTRUCTION;
1921 - 1945



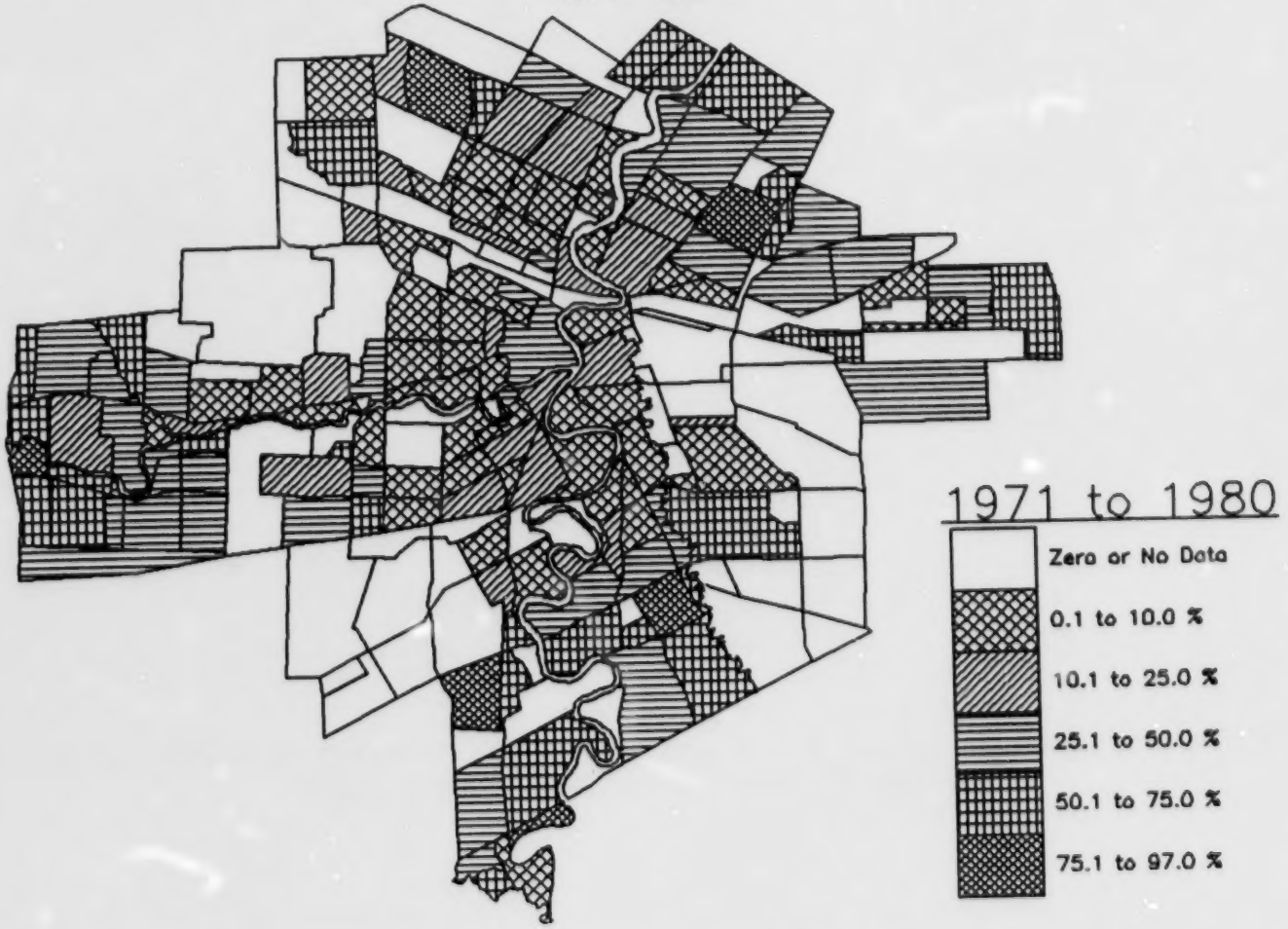
MAP 6 - WINNIPEG RENTAL HOUSING MARKET 1986:
TOTAL OCCUPIED DWELLING UNITS, ALL STRUCTURAL TYPES, PROPORTION BY PERIOD OF CONSTRUCTION;
1946 - 1960



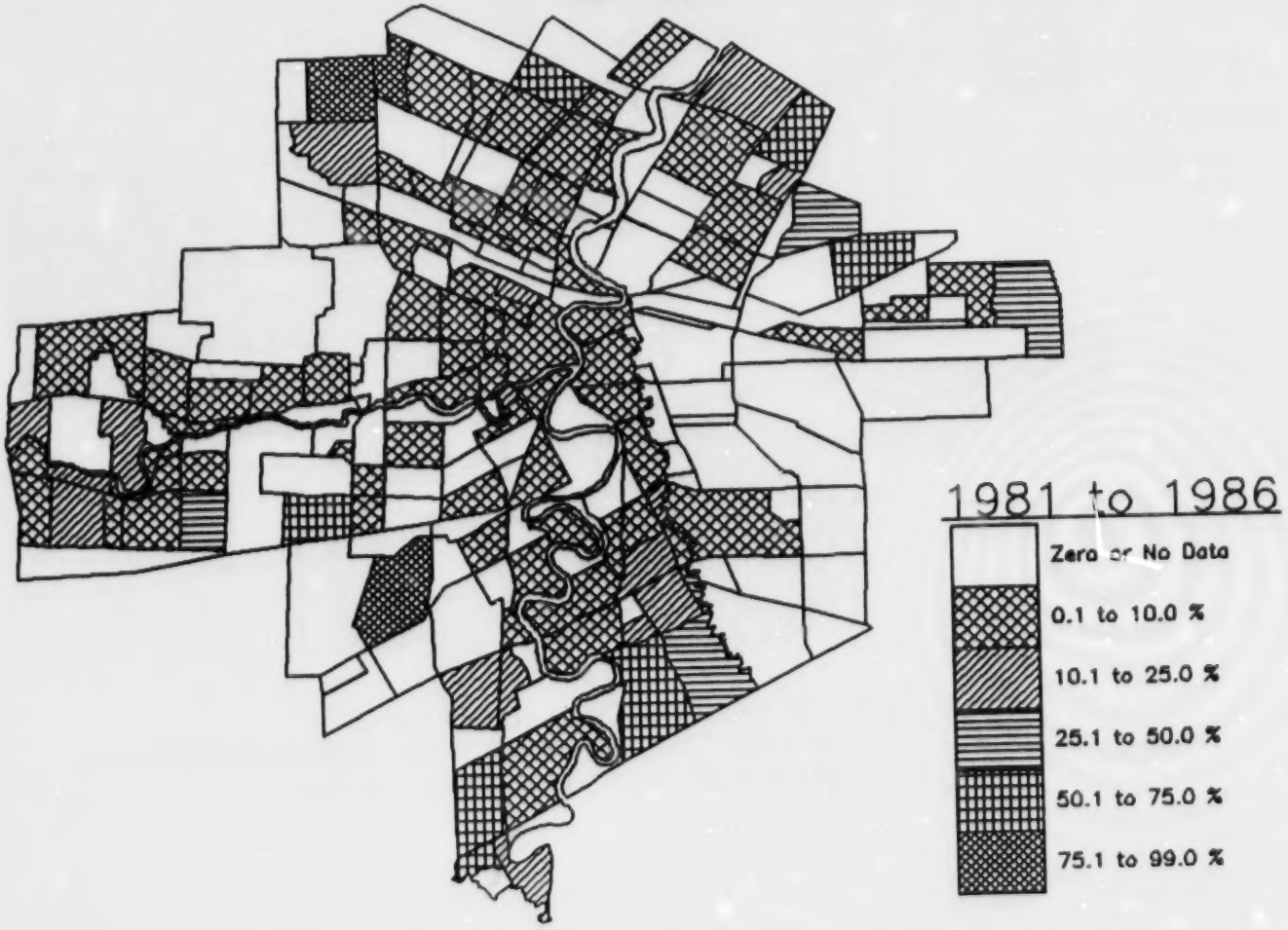
MAP 7 - WINNIPEG RENTAL HOUSING MARKET 1986:
TOTAL OCCUPIED DWELLING UNITS, ALL STRUCTURAL TYPES, PROPORTION BY PERIOD OF CONSTRUCTION;
1961 - 1970



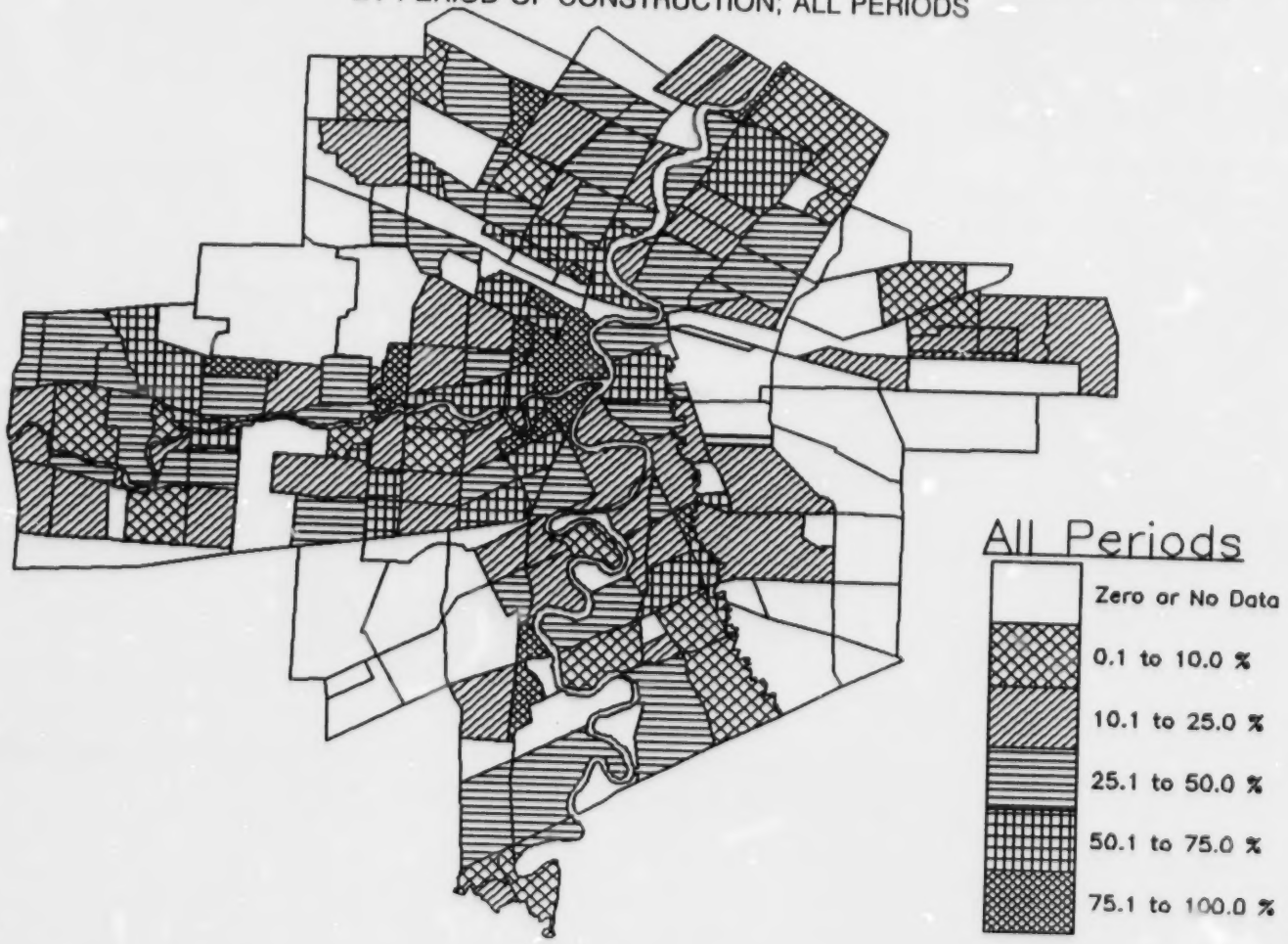
MAP 8 - WINNIPEG RENTAL HOUSING MARKET 1986:
TOTAL OCCUPIED DWELLING UNITS, ALL STRUCTURAL TYPES, PROPORTION BY PERIOD OF CONSTRUCTION;
1971 - 1980



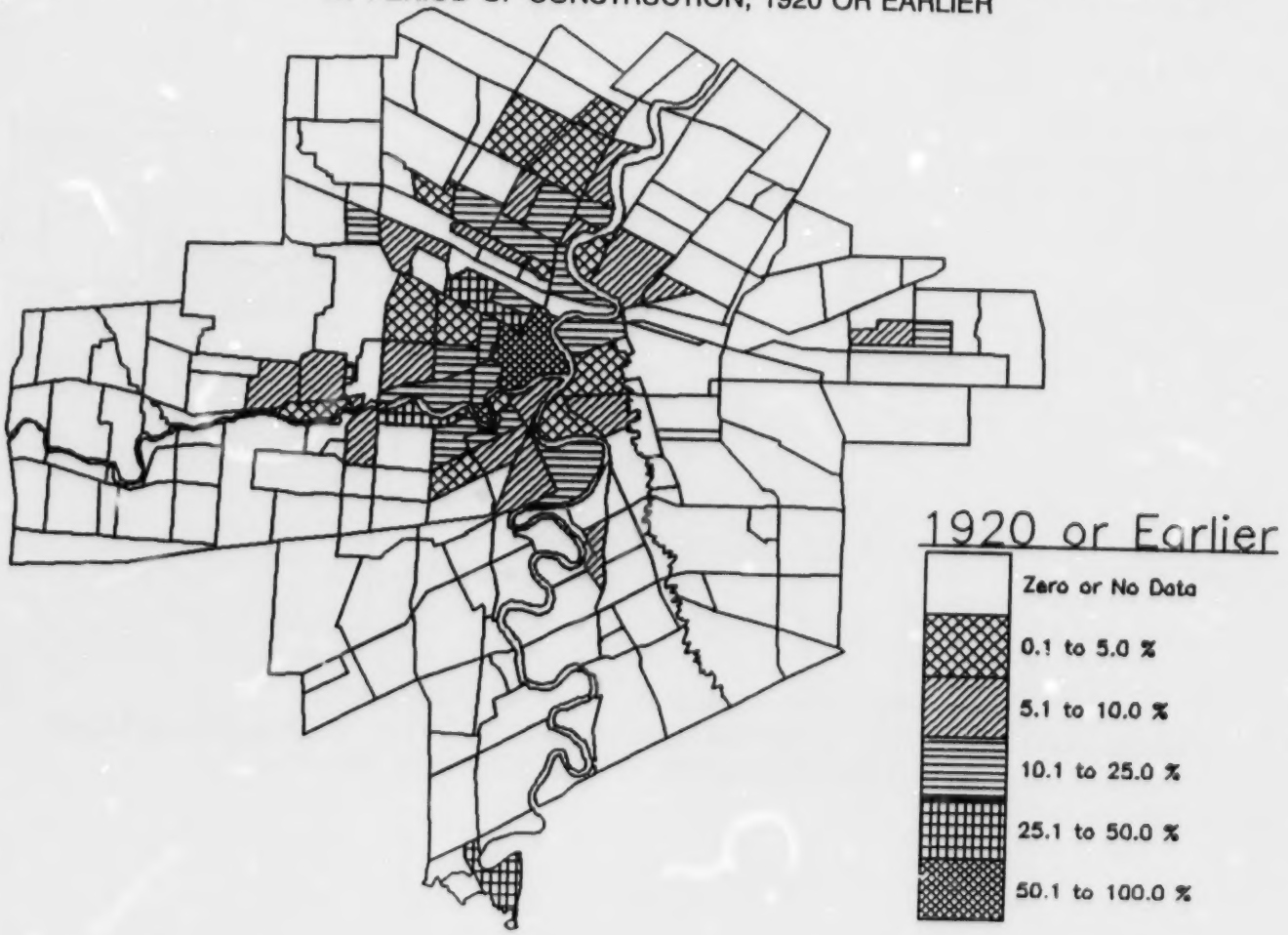
MAP 9 - WINNIPEG RENTAL HOUSING MARKET 1986:
TOTAL OCCUPIED DWELLING UNITS, ALL STRUCTURAL TYPES, PROPORTION BY PERIOD OF CONSTRUCTION;
1981 - 1986



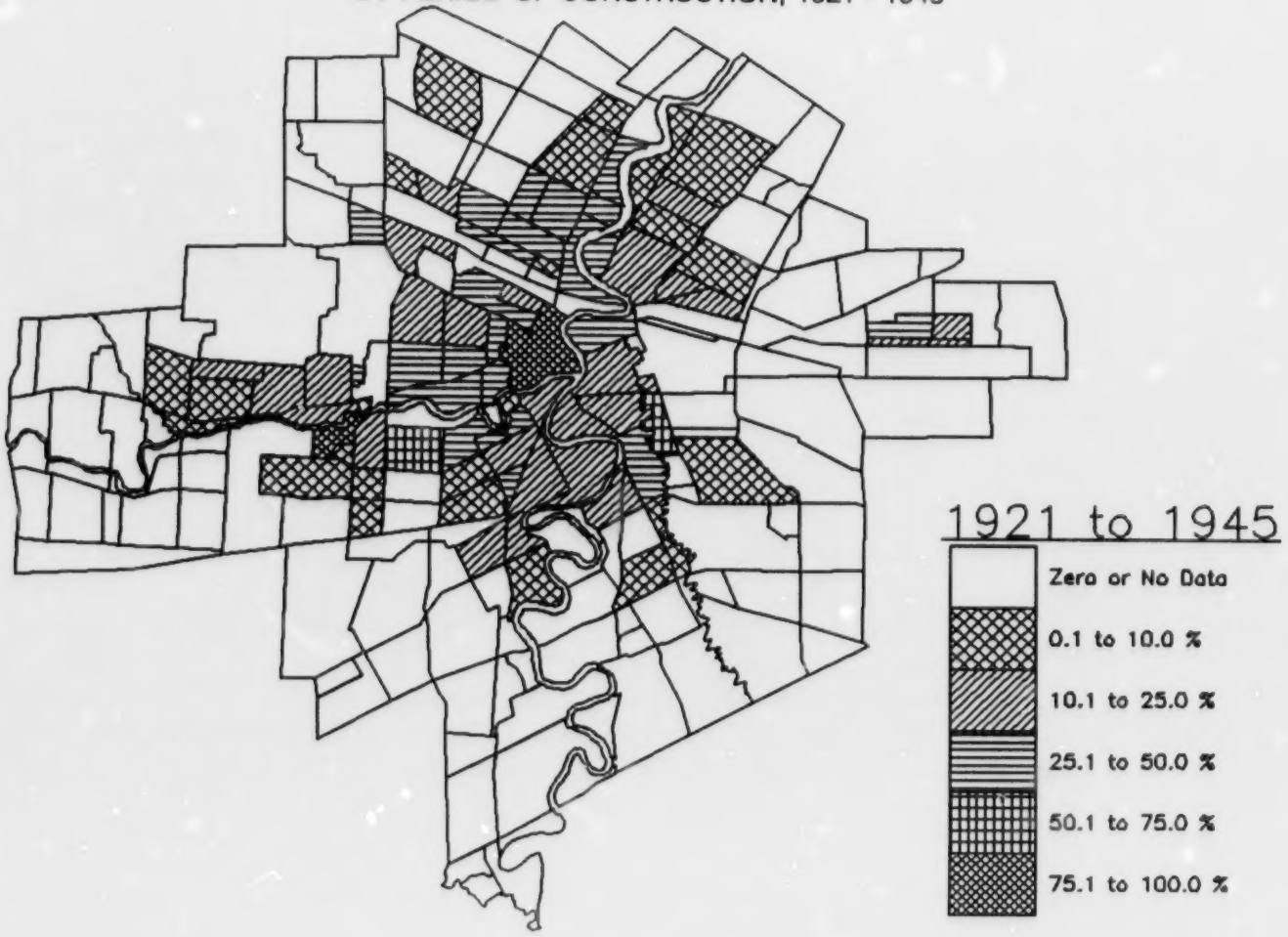
MAP 10 - WINNIPEG RENTAL HOUSING MARKET 1986:
PROPORTION RENTED, TOTAL OCCUPIED DWELLING UNITS, ALL STRUCTURAL TYPES,
BY PERIOD OF CONSTRUCTION; ALL PERIODS



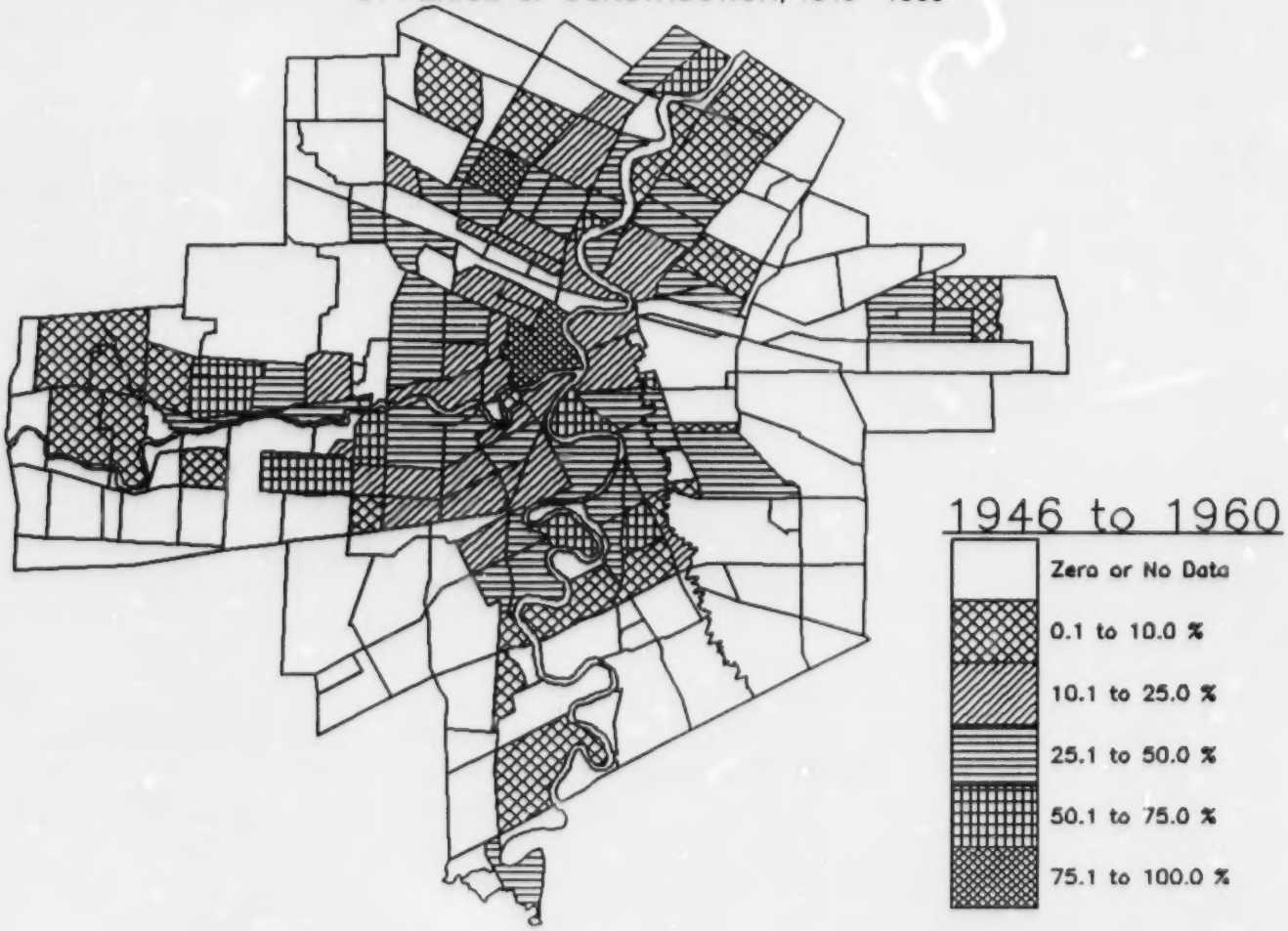
MAP 11 - WINNIPEG RENTAL HOUSING MARKET 1986:
PROPORTION RENTED, TOTAL OCCUPIED DWELLING UNITS, ALL STRUCTURAL TYPES,
BY PERIOD OF CONSTRUCTION; 1920 OR EARLIER



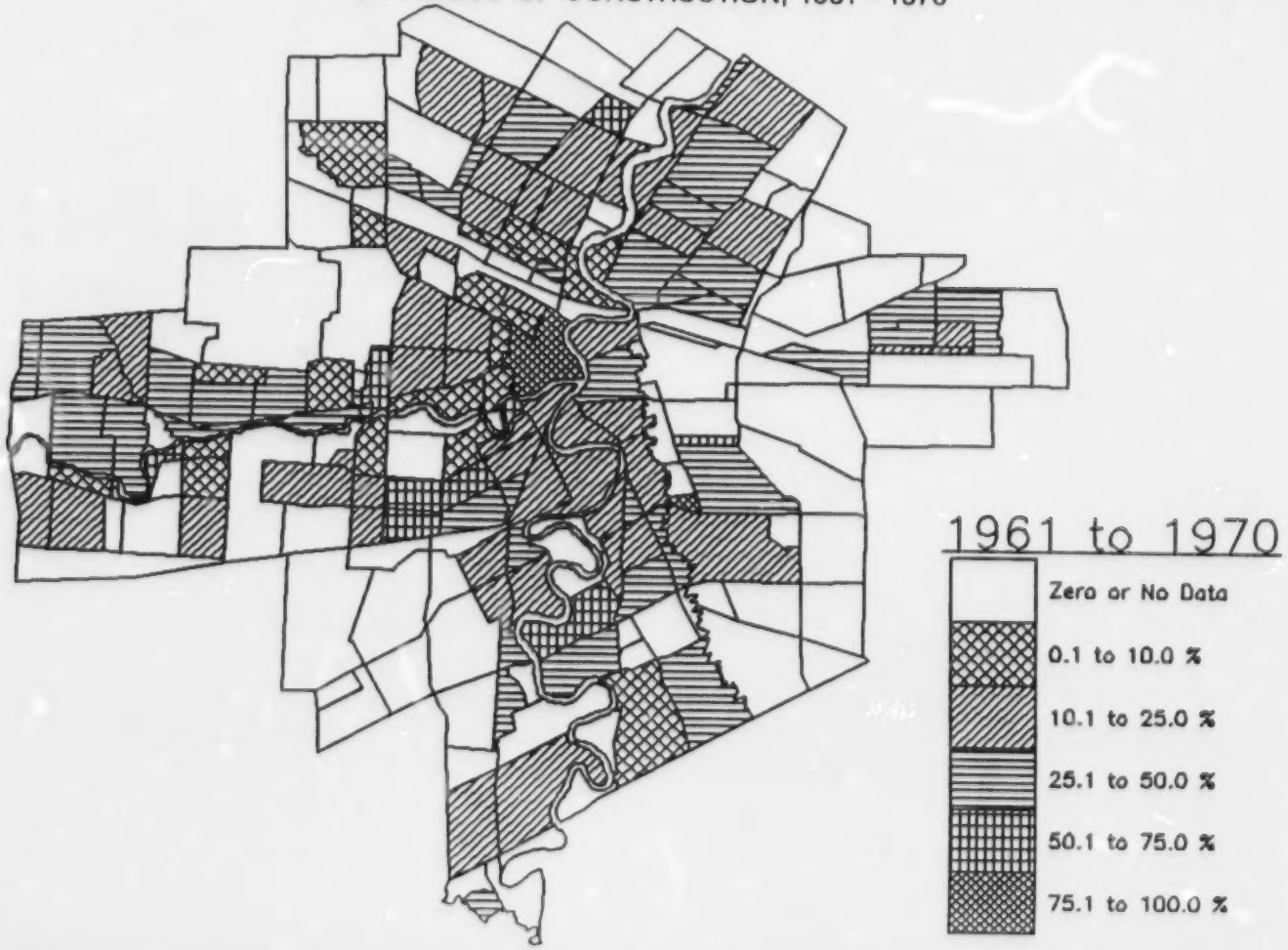
MAP 12 - WINNIPEG RENTAL HOUSING MARKET 1986:
PROPORTION RENTED, TOTAL OCCUPIED DWELLING UNITS, ALL STRUCTURAL TYPES,
BY PERIOD OF CONSTRUCTION; 1921 - 1945



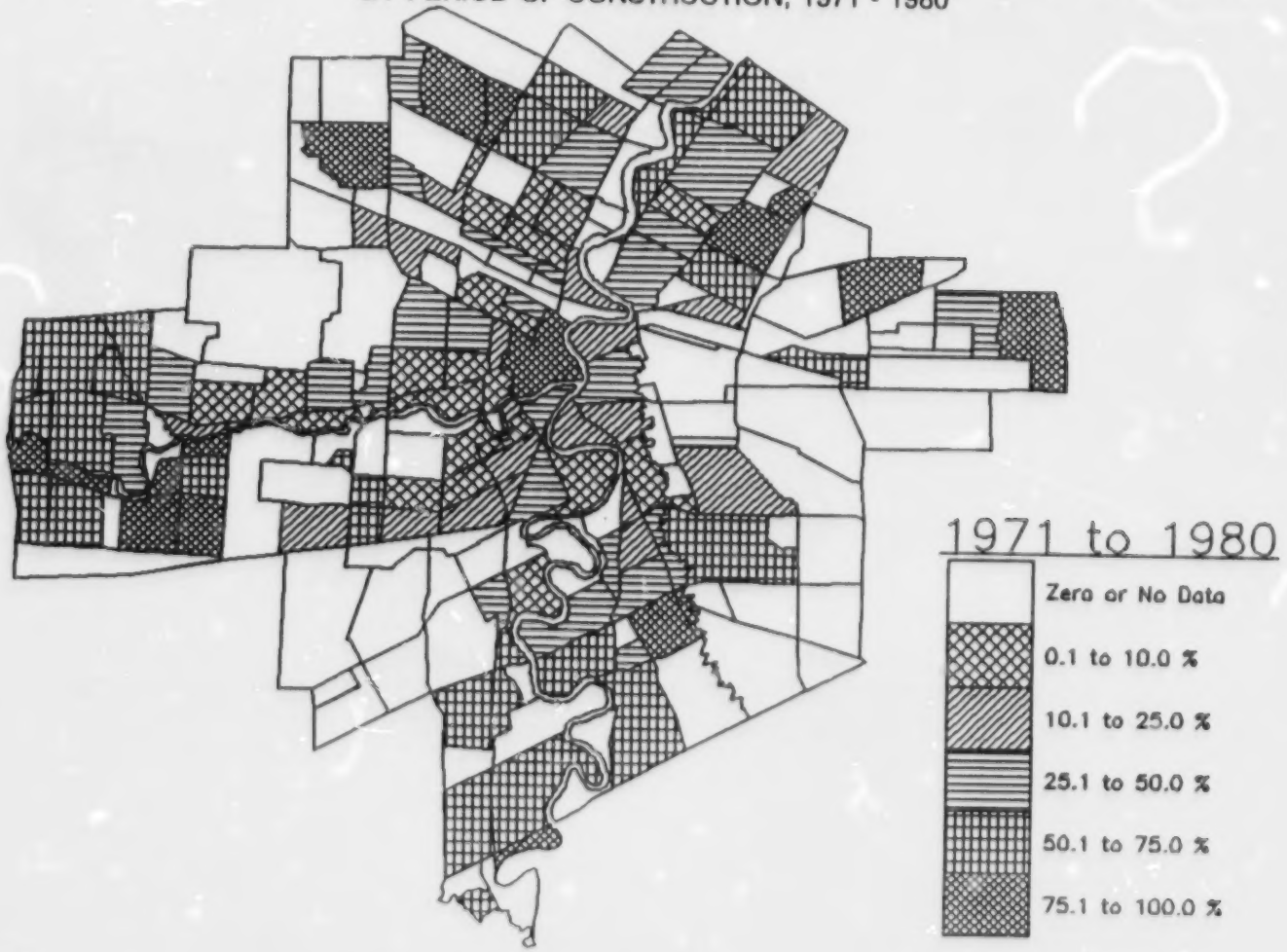
MAP 13 - WINNIPEG RENTAL HOUSING MARKET 1986:
PROPORTION RENTED, TOTAL OCCUPIED DWELLING UNITS, ALL STRUCTURAL TYPES,
BY PERIOD OF CONSTRUCTION; 1946 - 1960



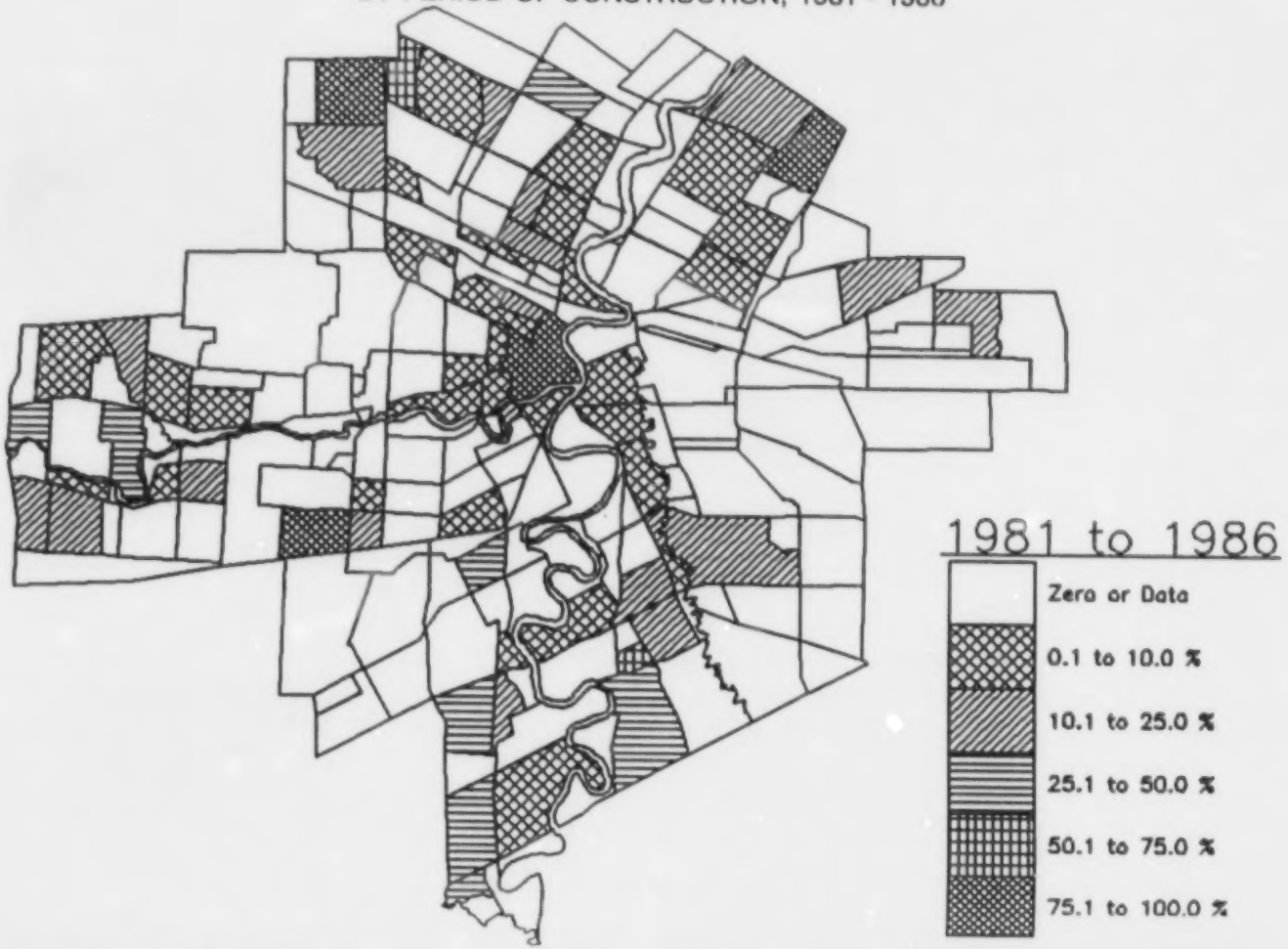
MAP 14 - WINNIPEG RENTAL HOUSING MARKET 1986:
PROPORTION RENTED, TOTAL OCCUPIED DWELLING UNITS, ALL STRUCTURAL TYPES,
BY PERIOD OF CONSTRUCTION; 1961 - 1970



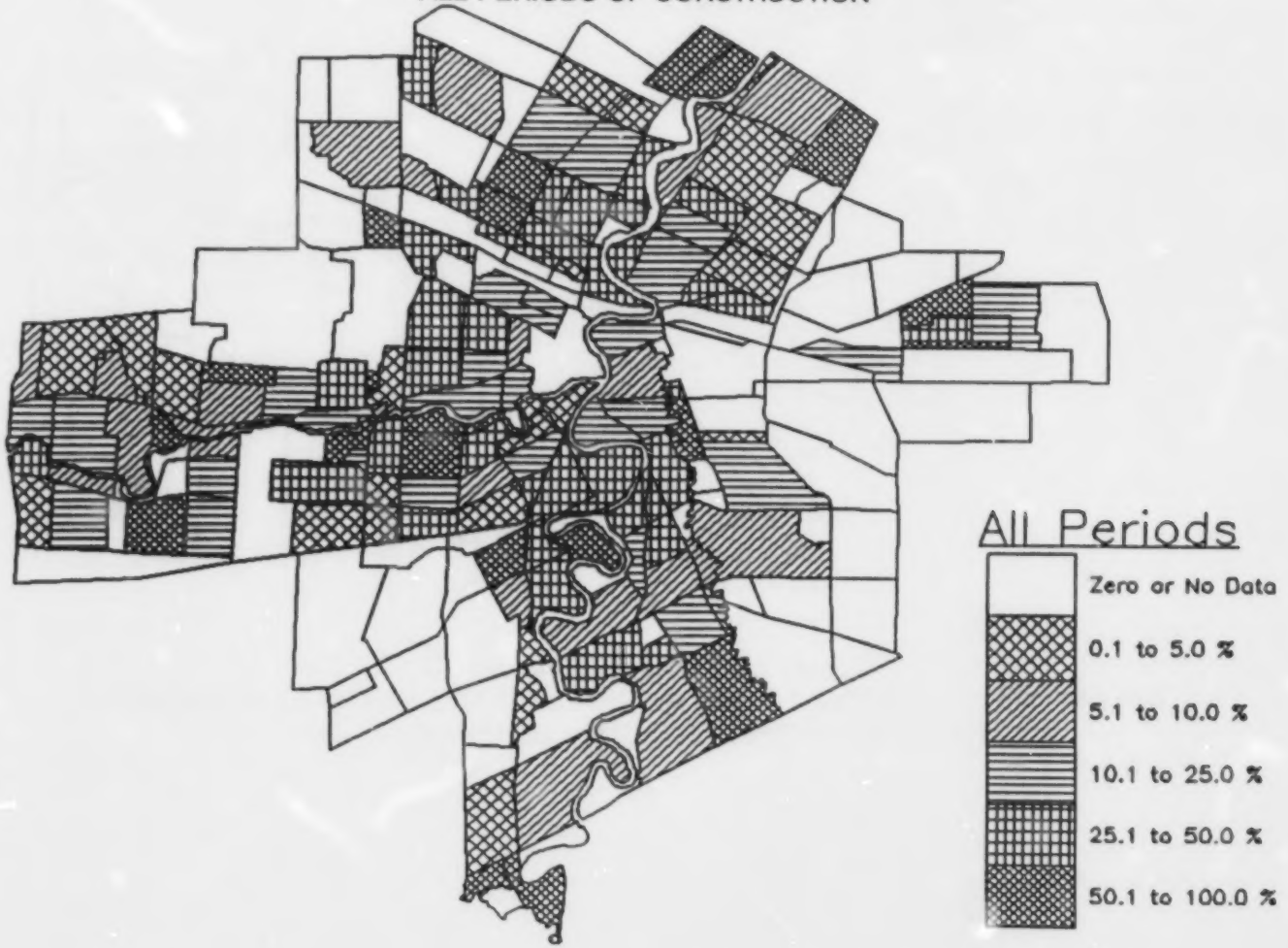
MAP 15 - WINNIPEG RENTAL HOUSING MARKET 1986:
PROPORTION RENTED, TOTAL OCCUPIED DWELLING UNITS, ALL STRUCTURAL TYPES,
BY PERIOD OF CONSTRUCTION; 1971 - 1980



MAP 16 - WINNIPEG RENTAL HOUSING MARKET 1986:
PROPORTION RENTED, TOTAL OCCUPIED DWELLING UNITS, ALL STRUCTURAL TYPES,
BY PERIOD OF CONSTRUCTION; 1981 - 1986

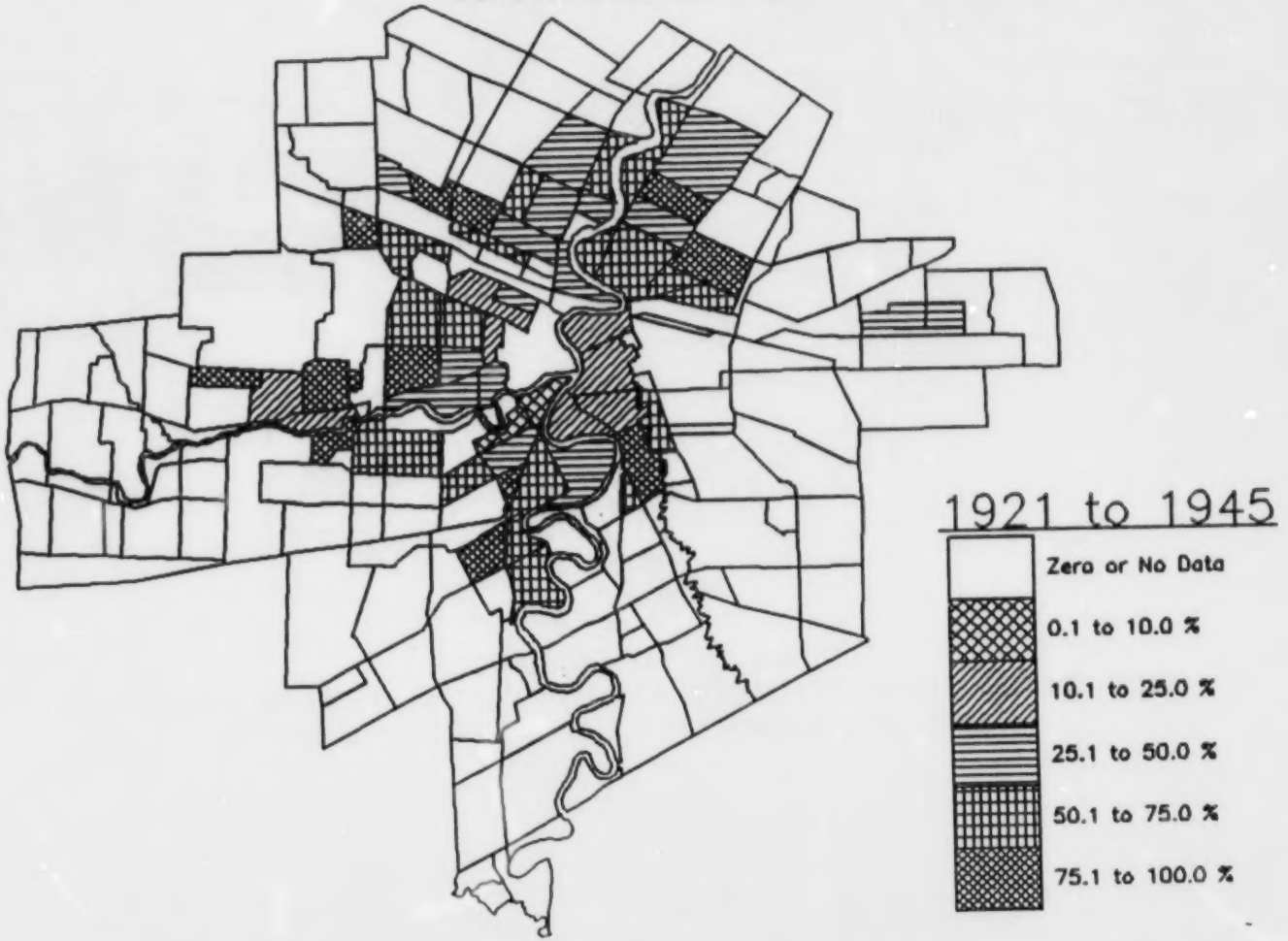


MAP 17 - WINNIPEG RENTAL HOUSING MARKET 1986:
PROPORTION "SINGLE DETACHED" UNITS, OF RENTED OCCUPIED DWELLING UNITS;
ALL PERIODS OF CONSTRUCTION

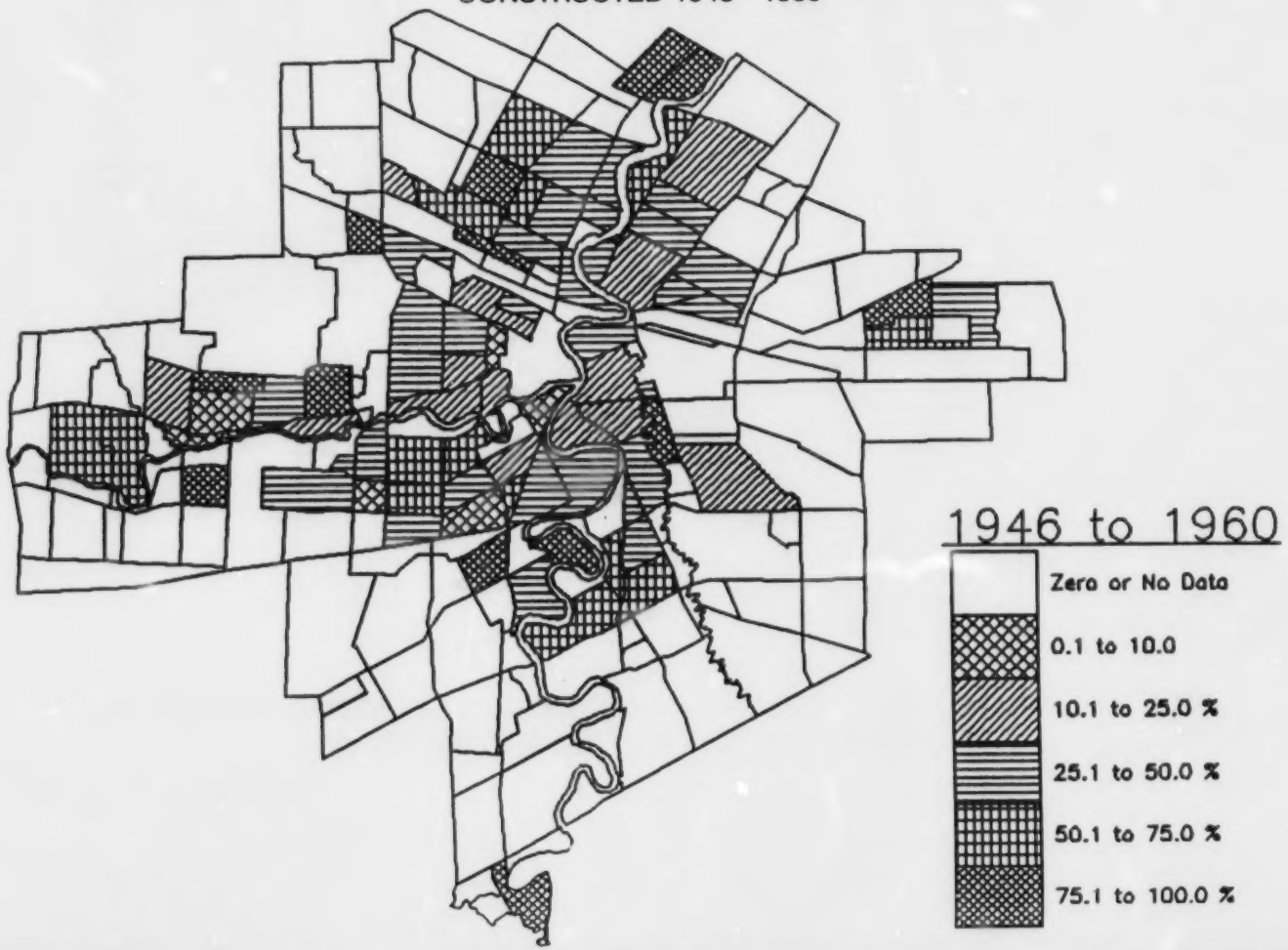


MAP 18 - WINNIPEG RENTAL HOUSING MARKET 1986:
PROPORTION "SINGLE DETACHED" UNITS, OF RENTED OCCUPIED DWELLING UNITS;
CONSTRUCTED 1920 OR EARLIER

MAP 19 - WINNIPEG RENTAL HOUSING MARKET 1986:
PROPORTION "SINGLE DETACHED" UNITS, OF RENTED OCCUPIED DWELLING UNITS;
CONSTRUCTED 1921 - 1945

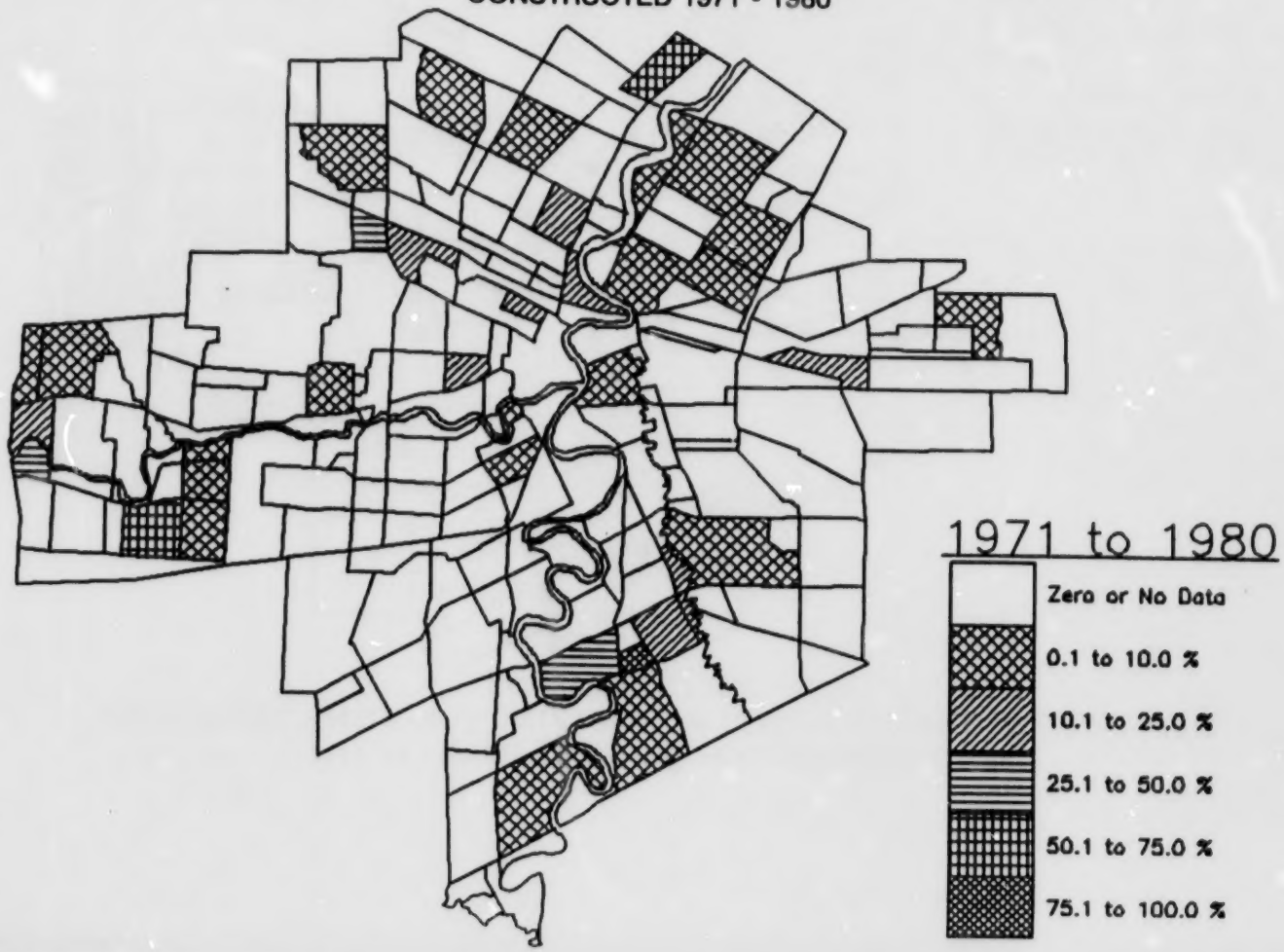


MAP 20 - WINNIPEG RENTAL HOUSING MARKET 1986:
PROPORTION "SINGLE DETACHED" UNITS, OF RENTED OCCUPIED DWELLING UNITS;
CONSTRUCTED 1946 - 1960

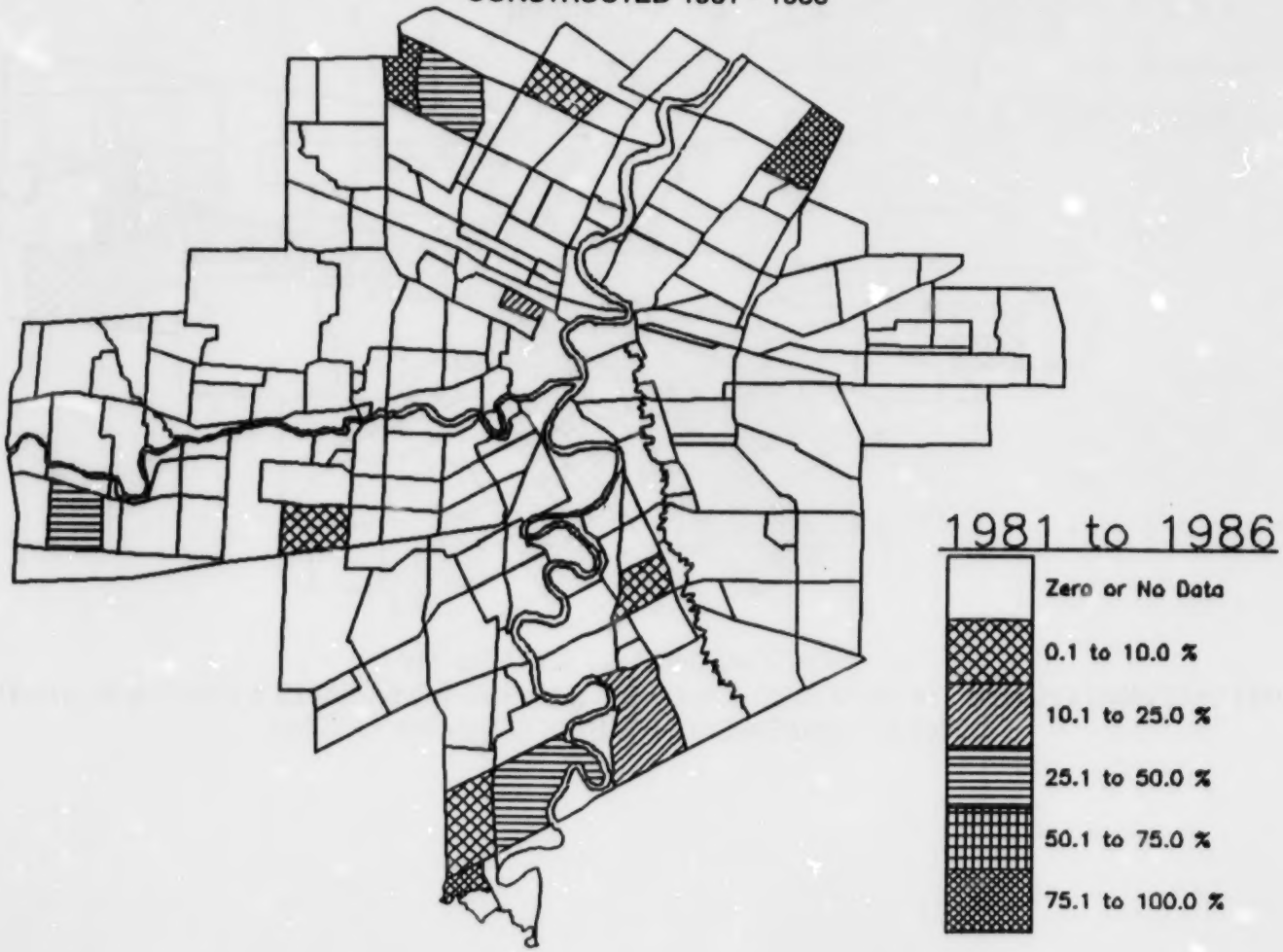


MAP 21 - WINNIPEG RENTAL HOUSING MARKET 1986:
PROPORTION "SINGLE DETACHED" UNITS, OF RENTED OCCUPIED DWELLING UNITS;
CONSTRUCTED 1961 - 1970

MAP 22 - WINNIPEG RENTAL HOUSING MARKET 1986:
PROPORTION "SINGLE DETACHED" UNITS, OF RENTED OCCUPIED DWELLING UNITS;
CONSTRUCTED 1971 - 1980

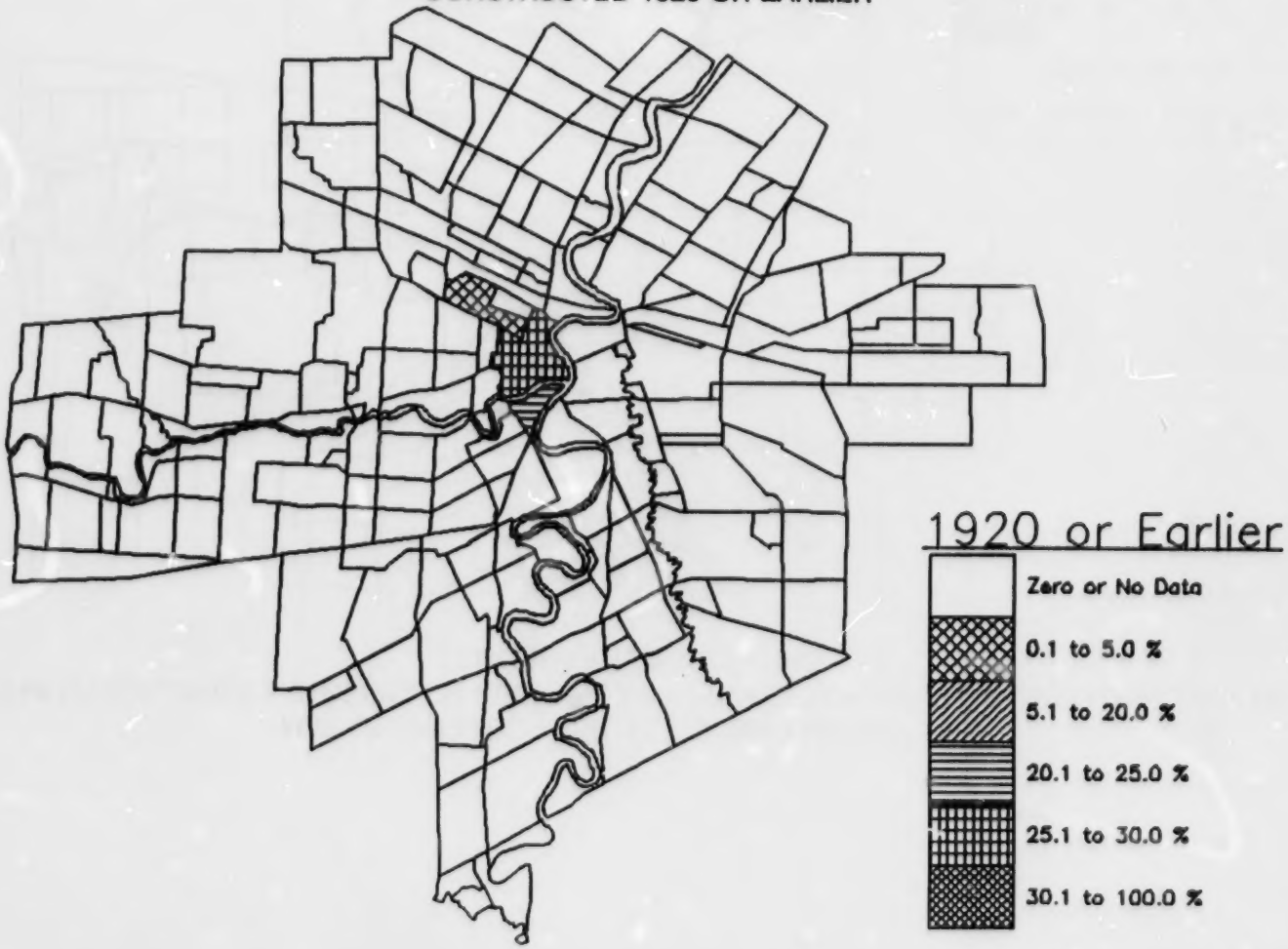


MAP 23 - WINNIPEG RENTAL HOUSING MARKET 1986:
PROPORTION "SINGLE DETACHED" UNITS, OF RENTED OCCUPIED DWELLING UNITS;
CONSTRUCTED 1981 - 1986

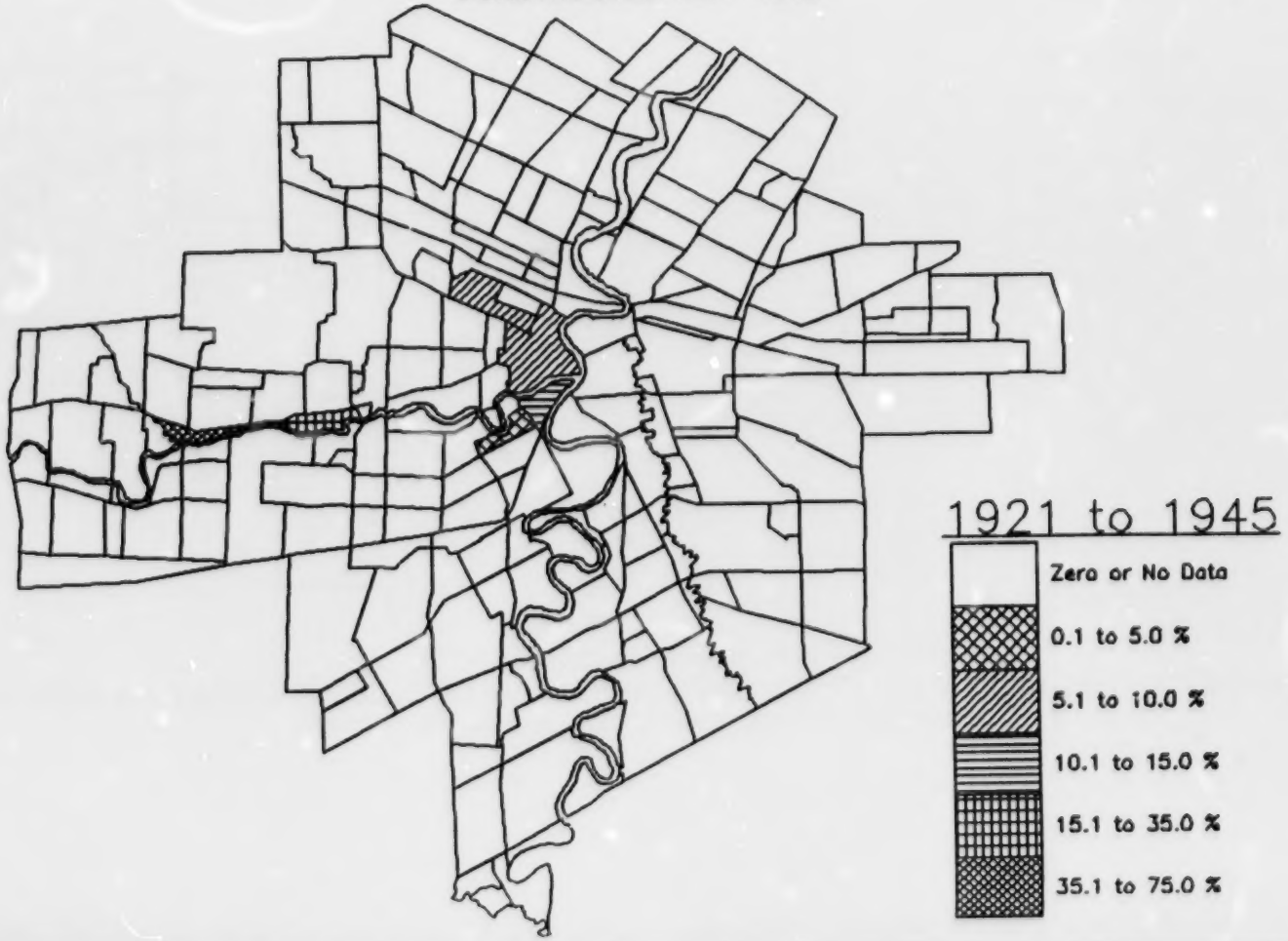


MAP 24 - WINNIPEG RENTAL HOUSING MARKET 1986:
APARTMENT BUILDINGS 5 STOREYS OR GREATER, AS A PROPORTION OF ALL RENTED DWELLING UNITS;
ALL PERIODS OF CONSTRUCTION

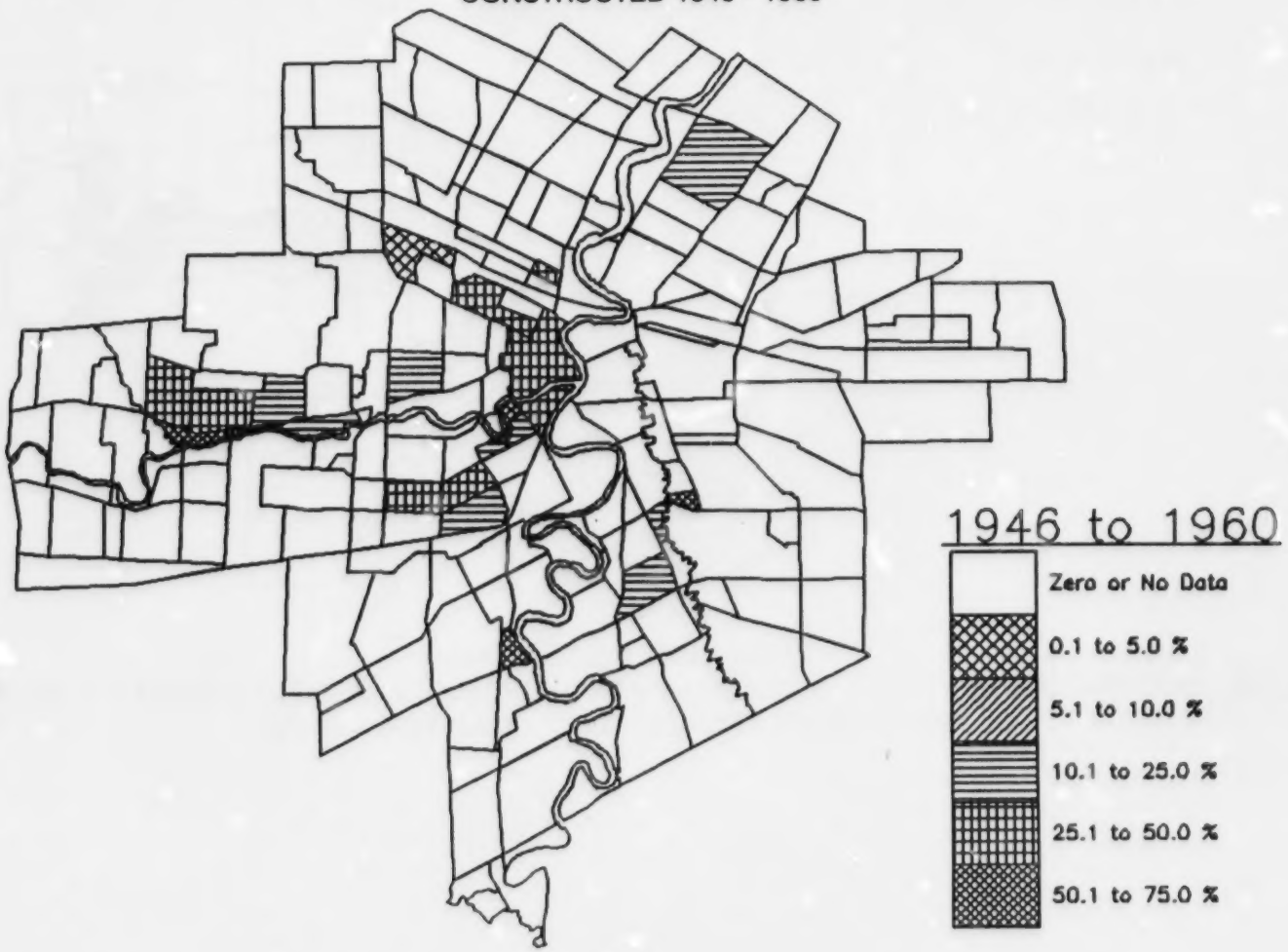
MAP 25 - WINNIPEG RENTAL HOUSING MARKET 1986:
APARTMENT BUILDINGS 5 STOREYS OR GREATER, AS A PROPORTION OF ALL RENTED DWELLING UNITS;
CONSTRUCTED 1920 OR EARLIER



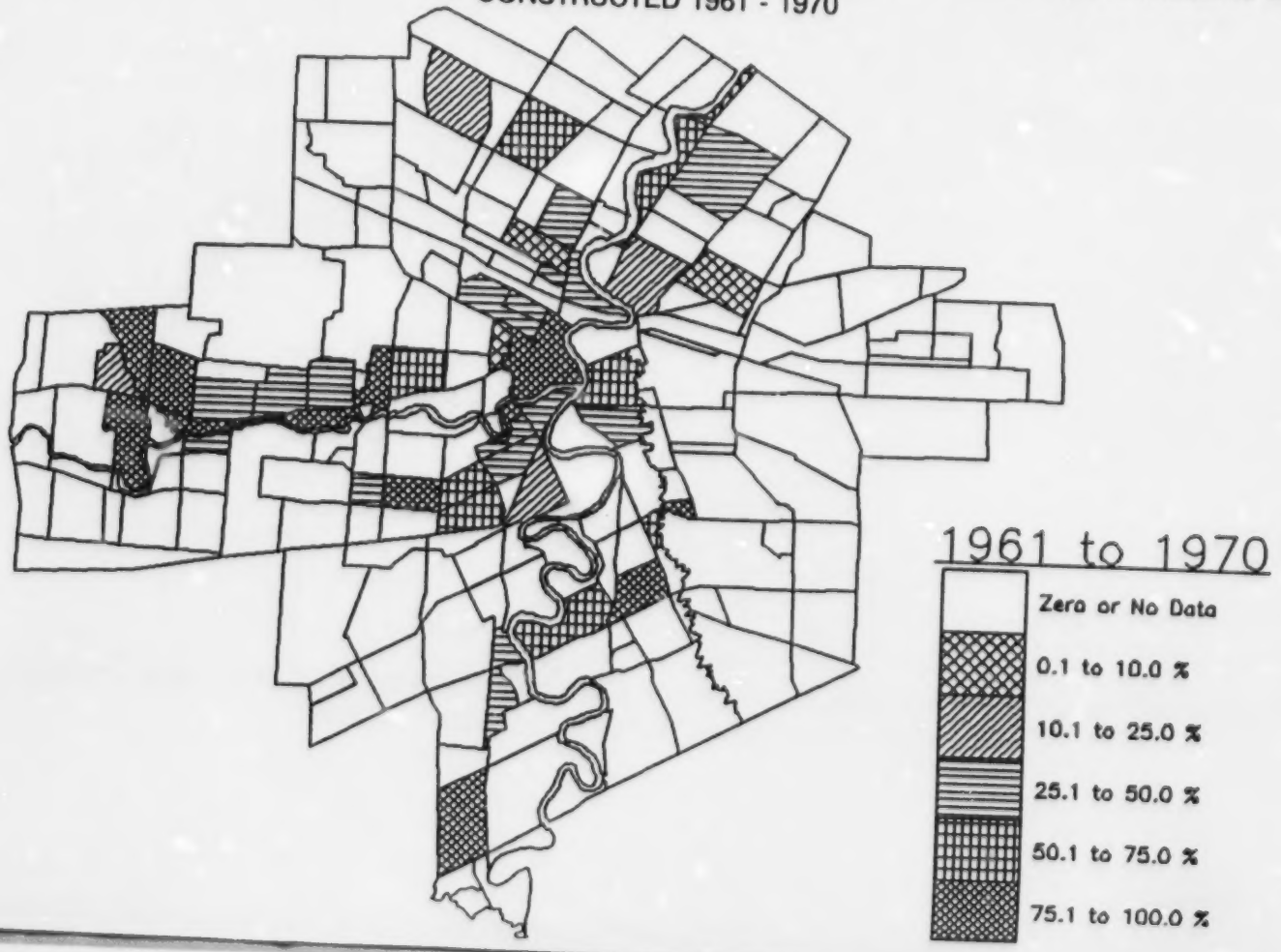
MAP 26 - WINNIPEG RENTAL HOUSING MARKET 1986:
APARTMENT BUILDINGS 5 STOREYS OR GREATER, AS A PROPORTION OF ALL RENTED DWELLING UNITS;
CONSTRUCTED 1921 - 1945



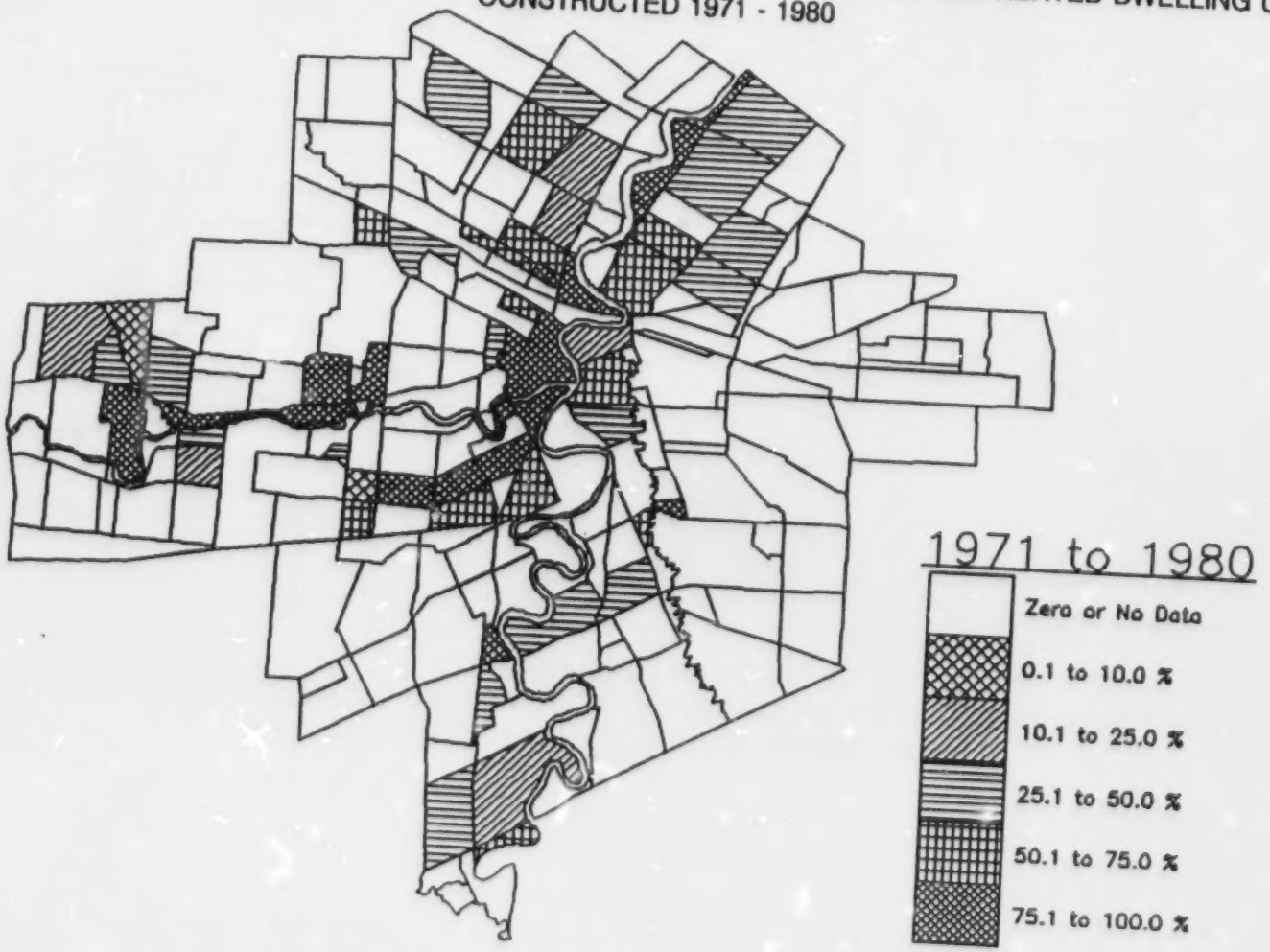
MAP 27 - WINNIPEG RENTAL HOUSING MARKET 1986:
APARTMENT BUILDINGS 5 STOREYS OR GREATER, AS A PROPORTION OF ALL RENTED DWELLING UNITS;
CONSTRUCTED 1946 - 1960



MAP 28 - WINNIPEG RENTAL HOUSING MARKET 1986:
APARTMENT BUILDINGS 5 STOREYS OR GREATER, AS A PROPORTION OF ALL RENTED DWELLING UNITS;
CONSTRUCTED 1961 - 1970

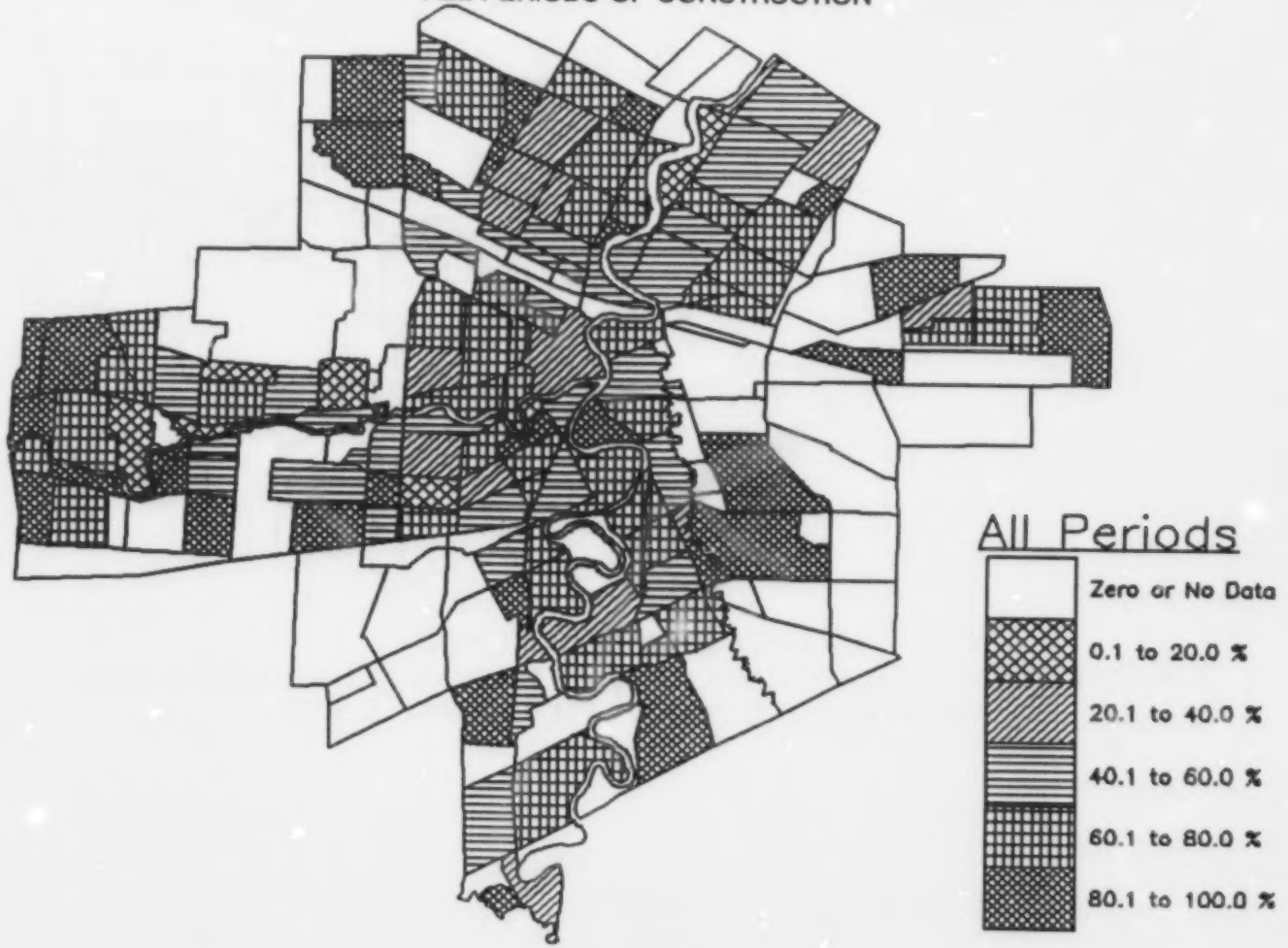


MAP 29 - WINNIPEG RENTAL HOUSING MARKET 1986:
APARTMENT BUILDINGS 5 STOREYS OR GREATER, AS A PROPORTION OF ALL RENTED DWELLING UNITS;
CONSTRUCTED 1971 - 1980

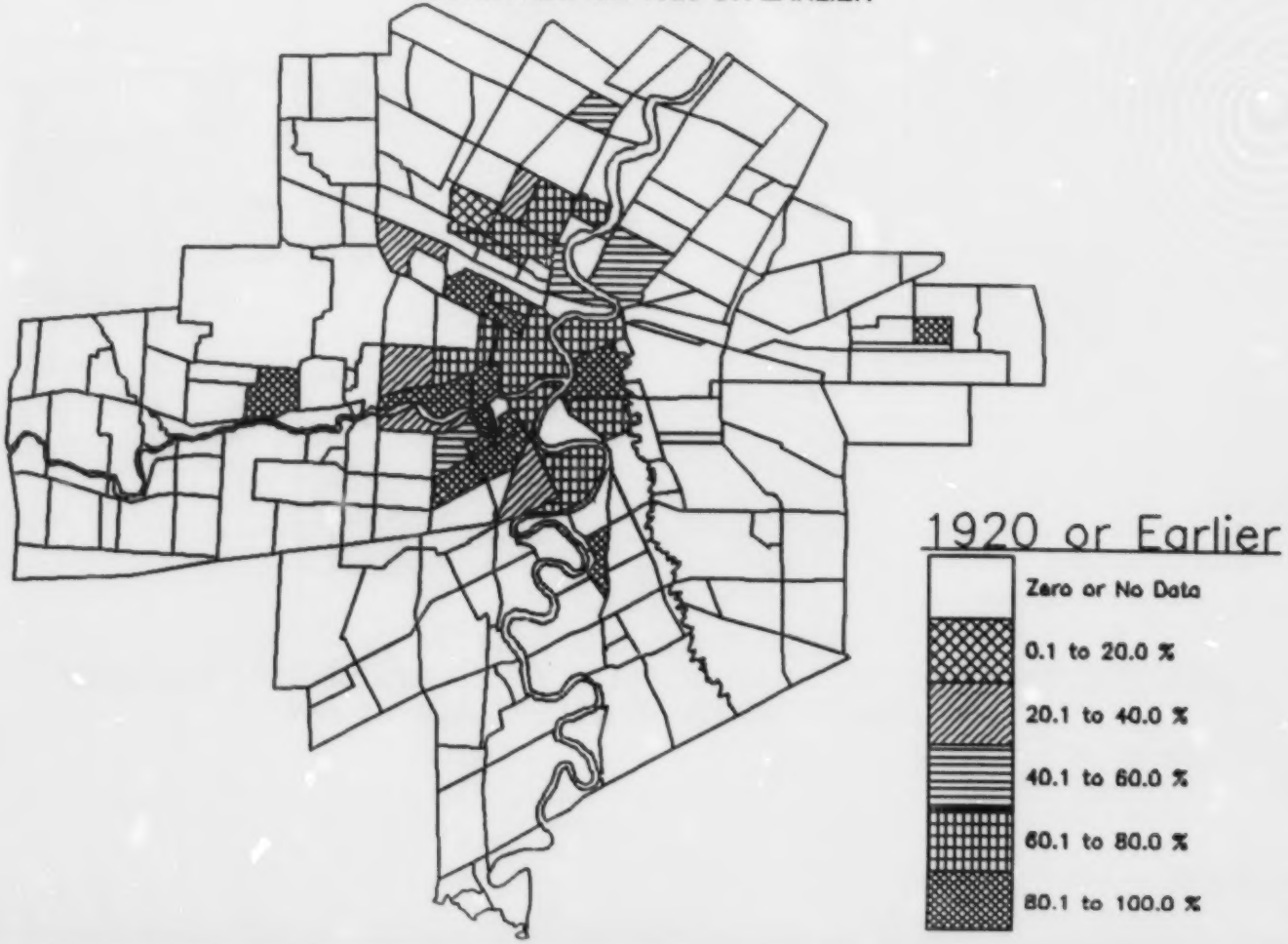


MAP 30, WINNIPEG RENTAL HOUSING MARKET 1986:
APARTMENT BUILDINGS 5 STOREYS OR GREATER, AS A PROPORTION OF ALL RENTED DWELLING UNITS;
CONSTRUCTED 1981 - 1986

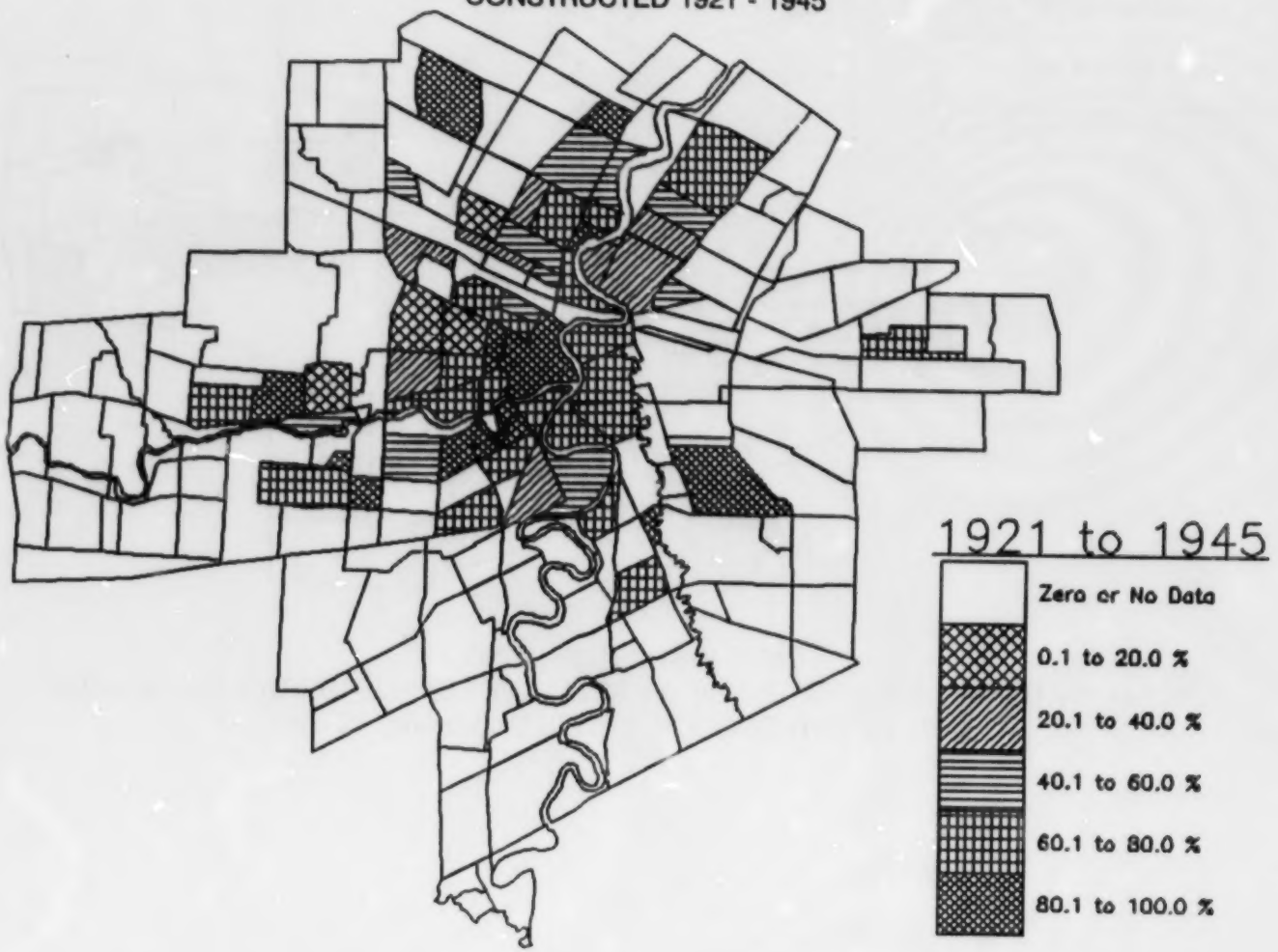
MAP 31 - WINNIPEG RENTAL HOUSING MARKET 1986:
PROPORTION "OTHER" STRUCTURAL TYPES, OF RENTED OCCUPIED DWELLING UNITS;
ALL PERIODS OF CONSTRUCTION



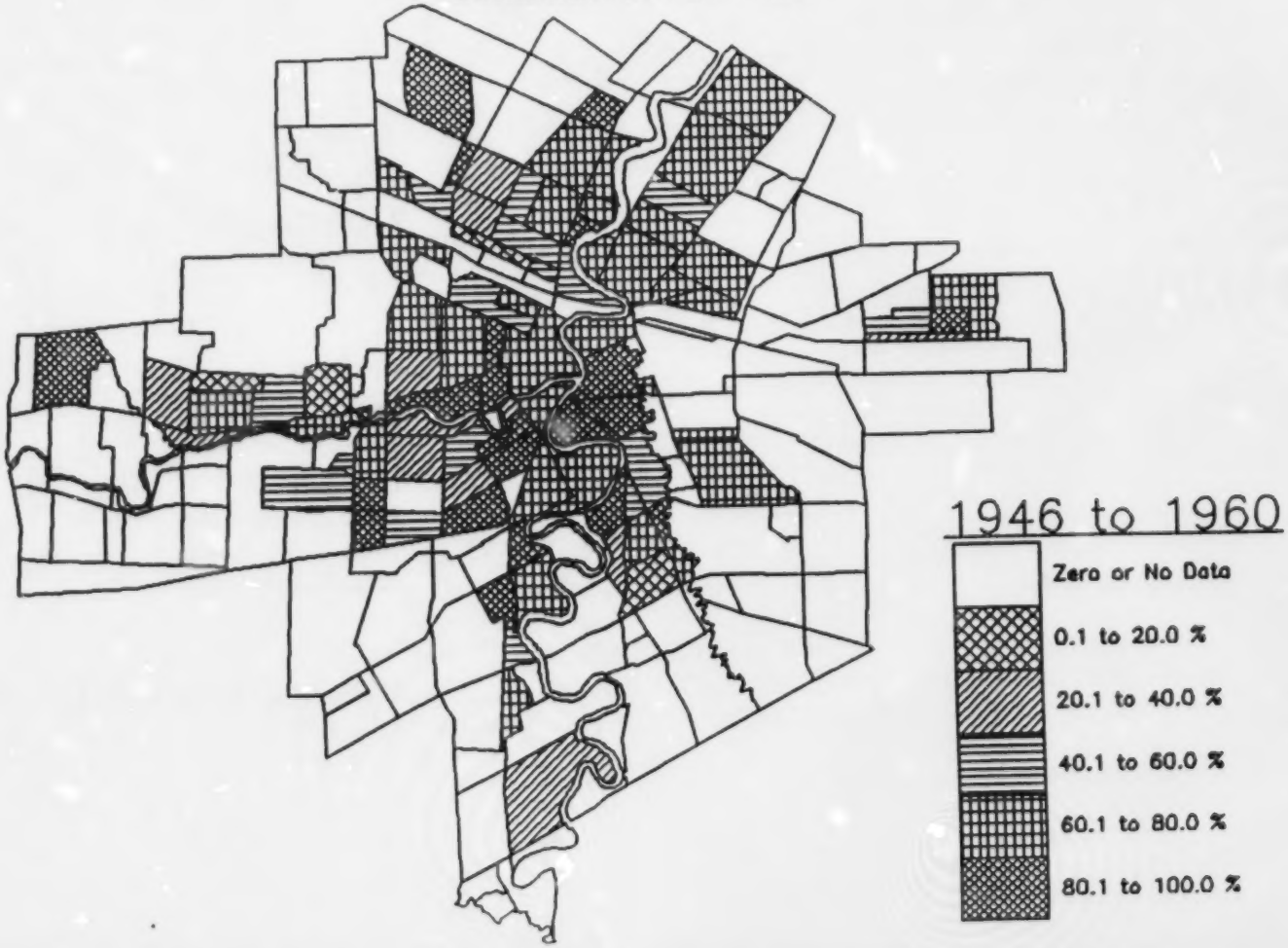
MAP 32 - WINNIPEG RENTAL HOUSING MARKET 1986:
PROPORTION "OTHER" STRUCTURAL TYPES, OF RENTED OCCUPIED DWELLING UNITS;
CONSTRUCTED 1920 OR EARLIER



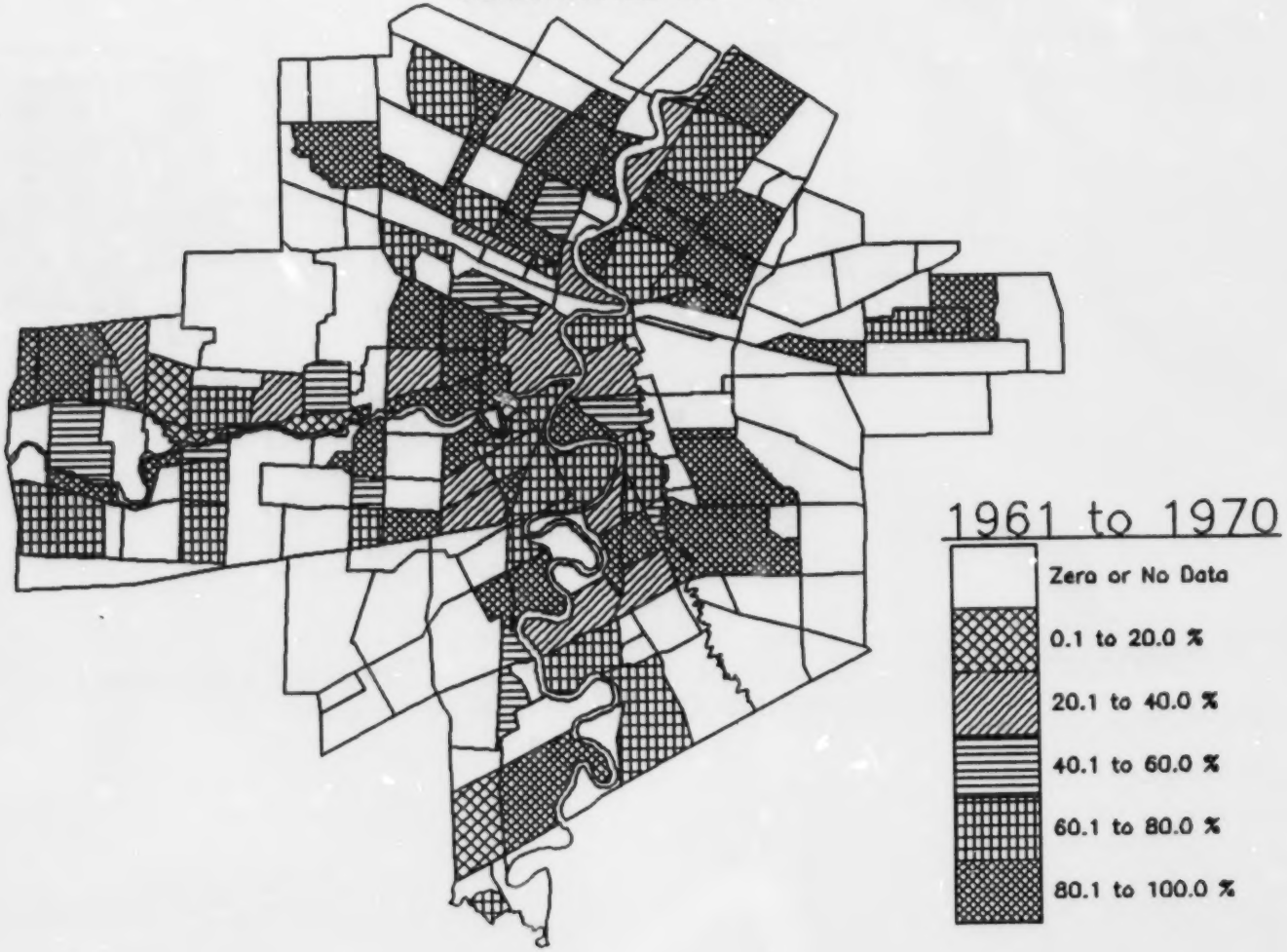
MAP 33 - WINNIPEG RENTAL HOUSING MARKET 1986:
PROPORTION "OTHER" STRUCTURAL TYPES, OF RENTED OCCUPIED DWELLING UNITS;
CONSTRUCTED 1921 - 1945



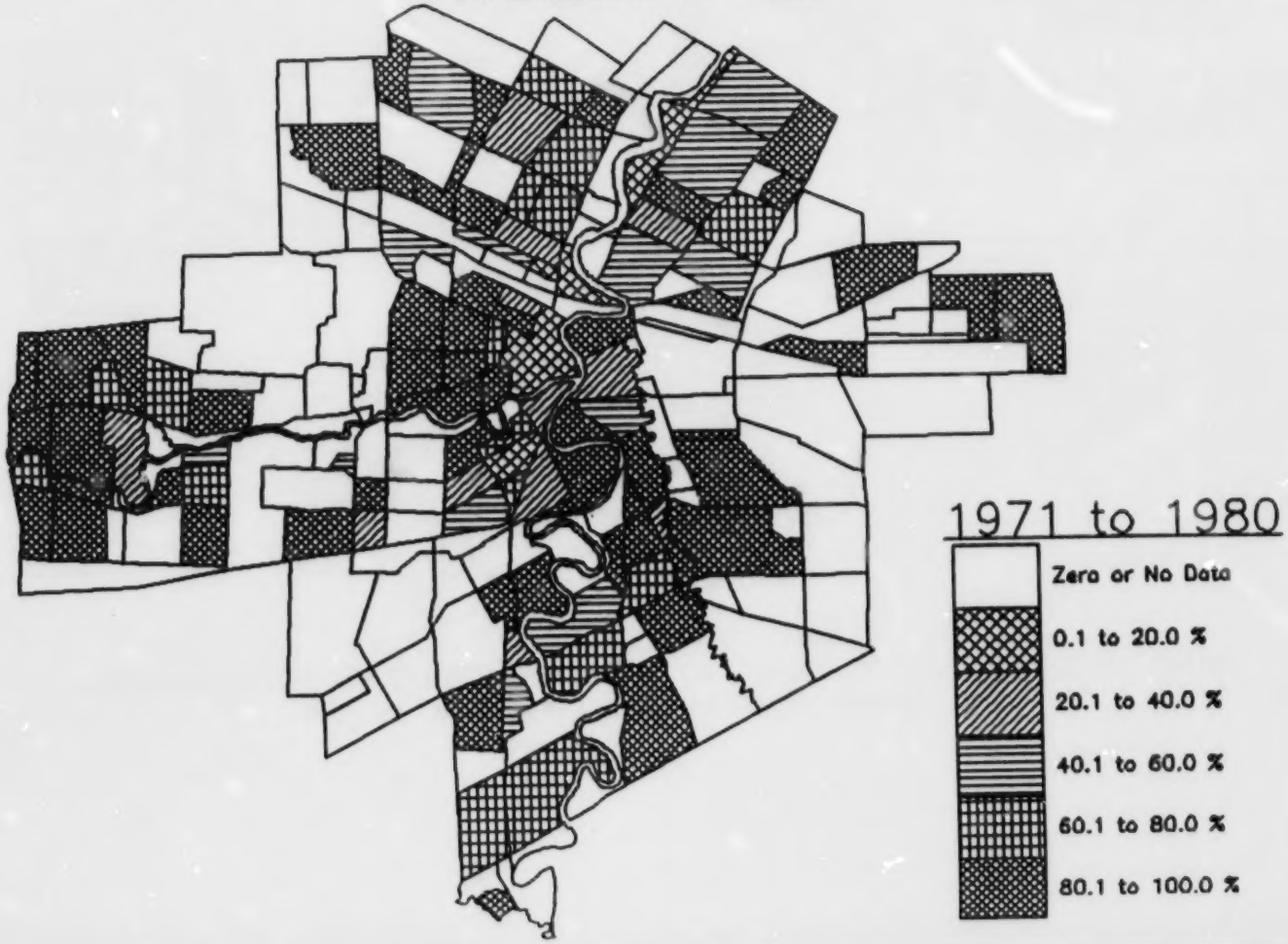
MAP 34 - WINNIPEG RENTAL HOUSING MARKET 1986:
PROPORTION "OTHER" STRUCTURAL TYPES, OF RENTED OCCUPIED DWELLING UNITS;
CONSTRUCTED 1946 - 1960



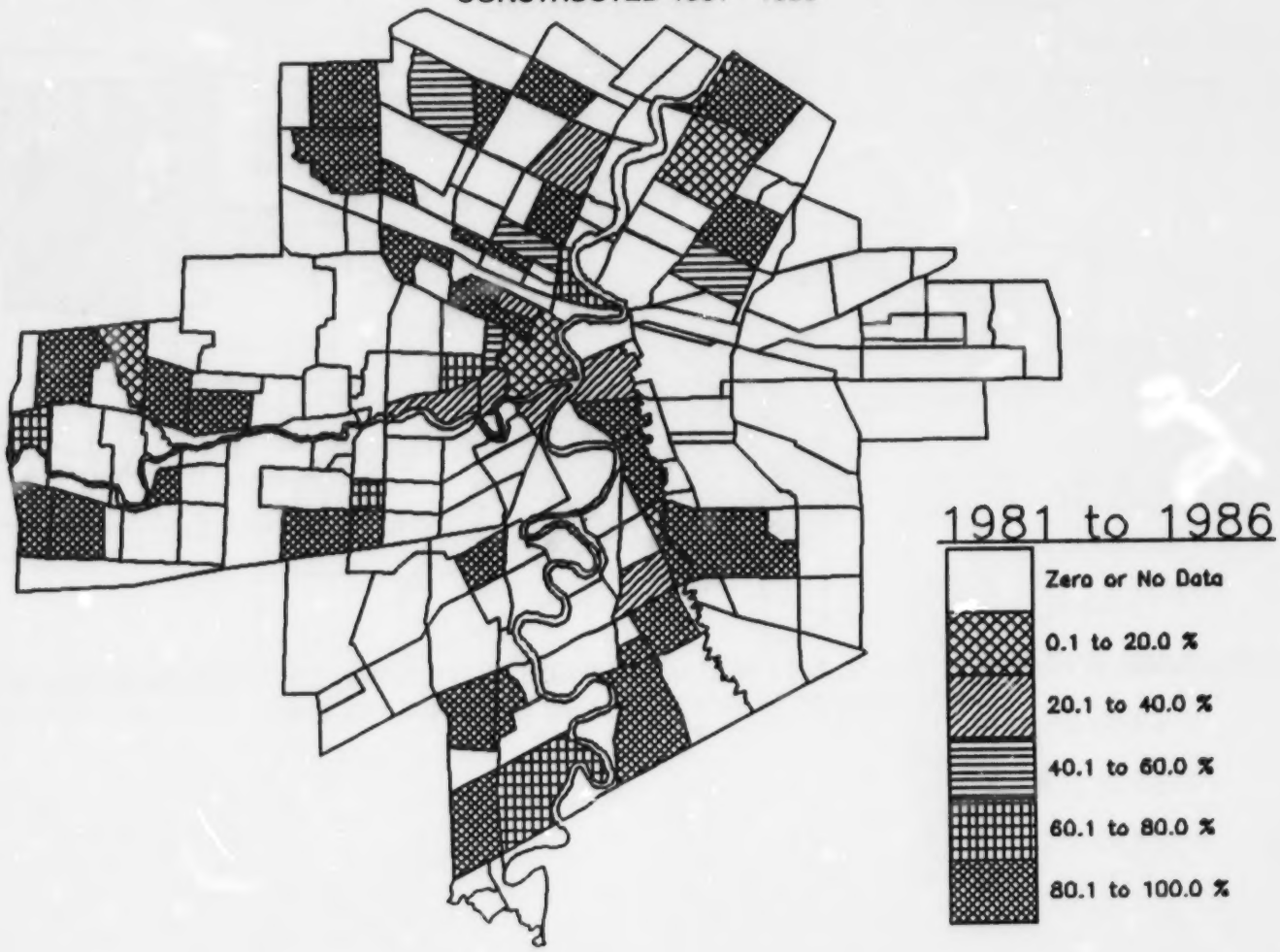
MAP 35 - WINNIPEG RENTAL HOUSING MARKET 1986:
PROPORTION "OTHER" STRUCTURAL TYPES, OF RENTED OCCUPIED DWELLING UNITS;
CONSTRUCTED 1961 - 1970



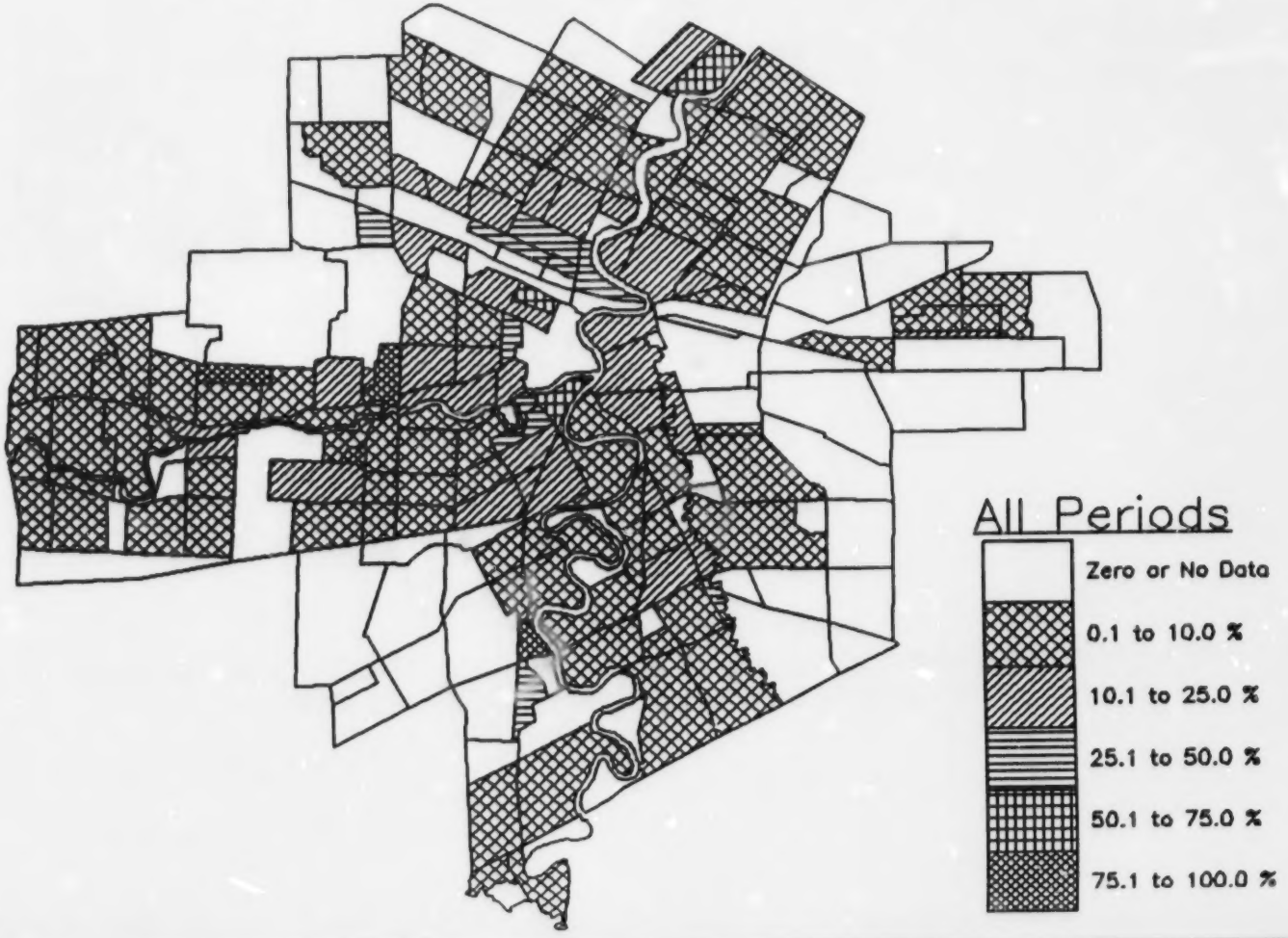
MAP 36 - WINNIPEG RENTAL HOUSING MARKET 1986:
PROPORTION "OTHER" STRUCTURAL TYPES, OF RENTED OCCUPIED DWELLING UNITS;
CONSTRUCTED 1971 - 1980



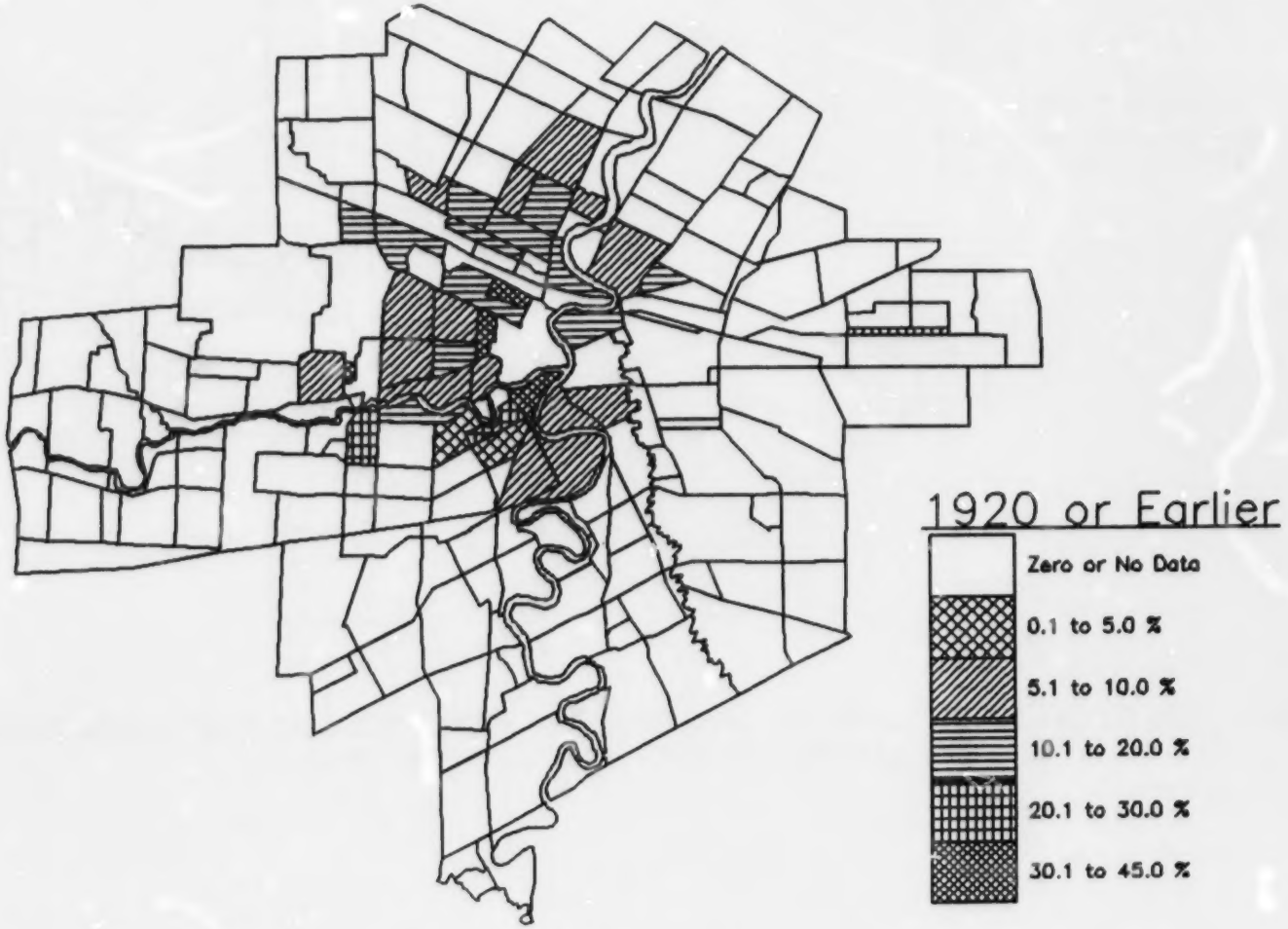
MAP 37 - WINNIPEG RENTAL HOUSING MARKET 1986:
PROPORTION "OTHER" STRUCTURAL TYPES, OF RENTED OCCUPIED DWELLING UNITS;
CONSTRUCTED 1981 - 1986



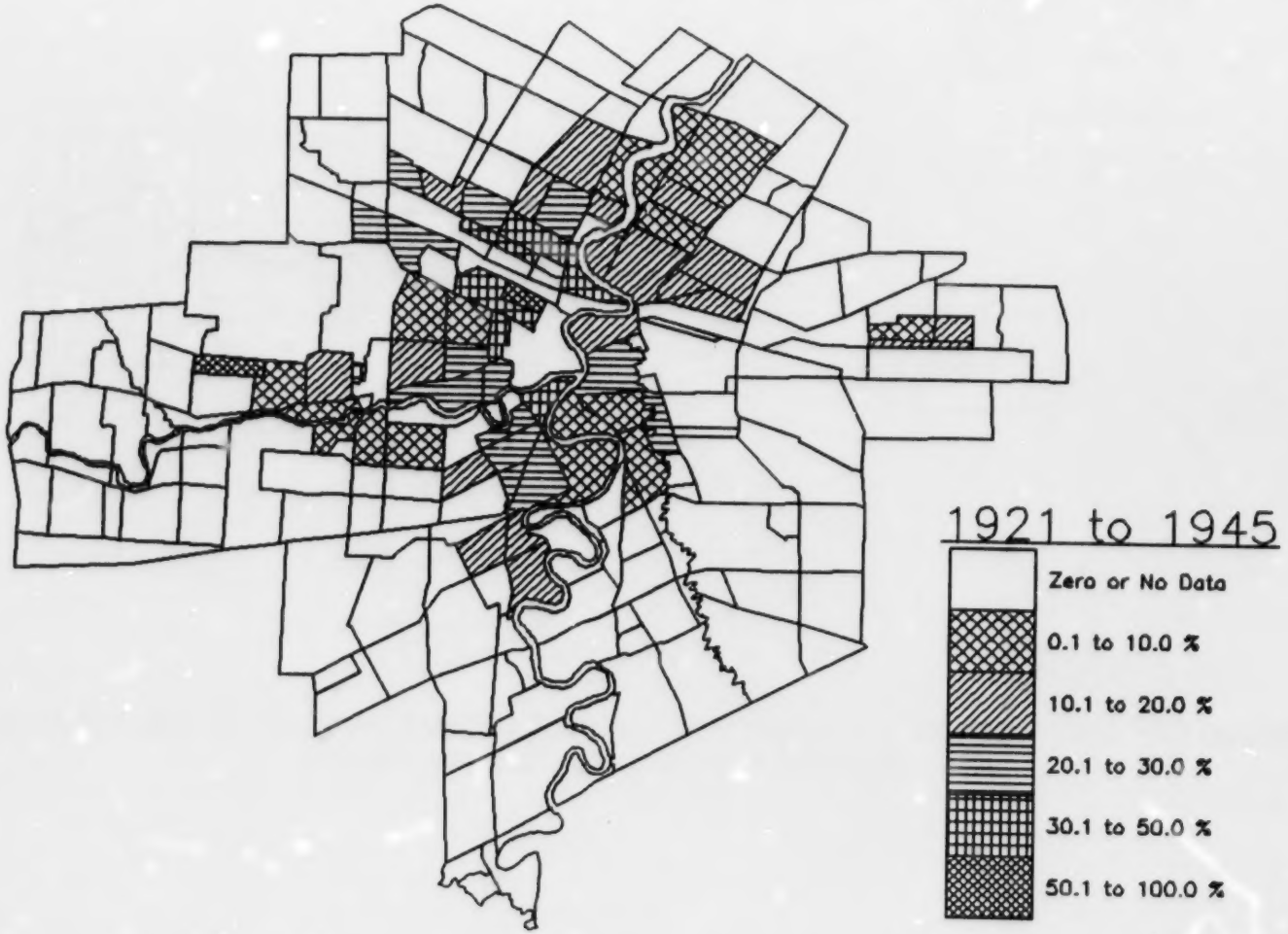
MAP 38 - WINNIPEG RENTAL HOUSING MARKET 1986:
PROPORTION RENTED OF TOTAL SINGLE DETACHED DWELLING UNITS; ALL PERIODS OF CONSTRUCTION



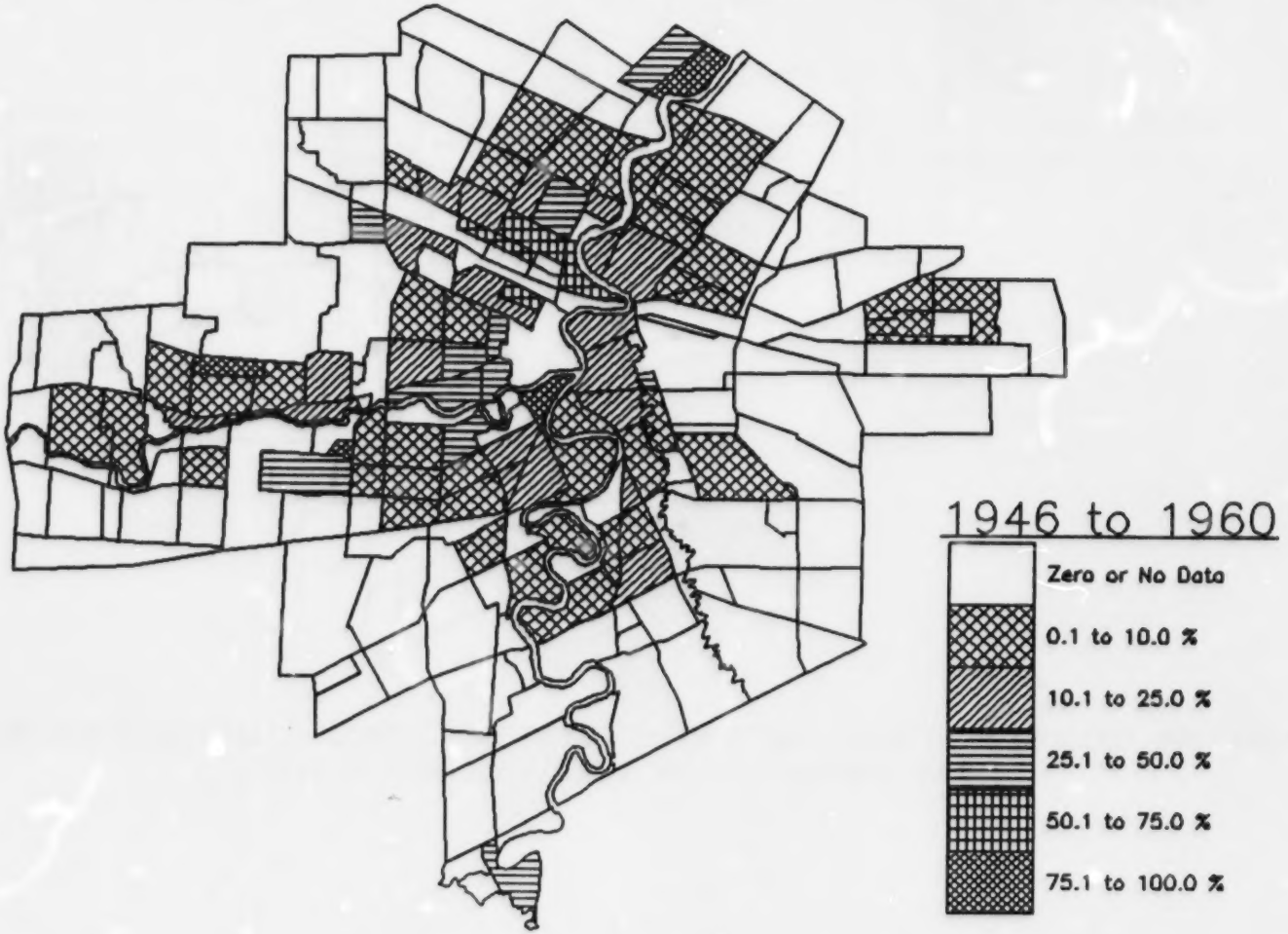
MAP 39 - WINNIPEG RENTAL HOUSING MARKET 1986:
PROPORTION RENTED OF TOTAL SINGLE DETACHED DWELLING UNITS; CONSTRUCTED 1920 OR EARLIER



MAP 40 - WINNIPEG RENTAL HOUSING MARKET 1986:
PROPORTION RENTED OF TOTAL SINGLE DETACHED DWELLING UNITS; CONSTRUCTED 1921 - 1945

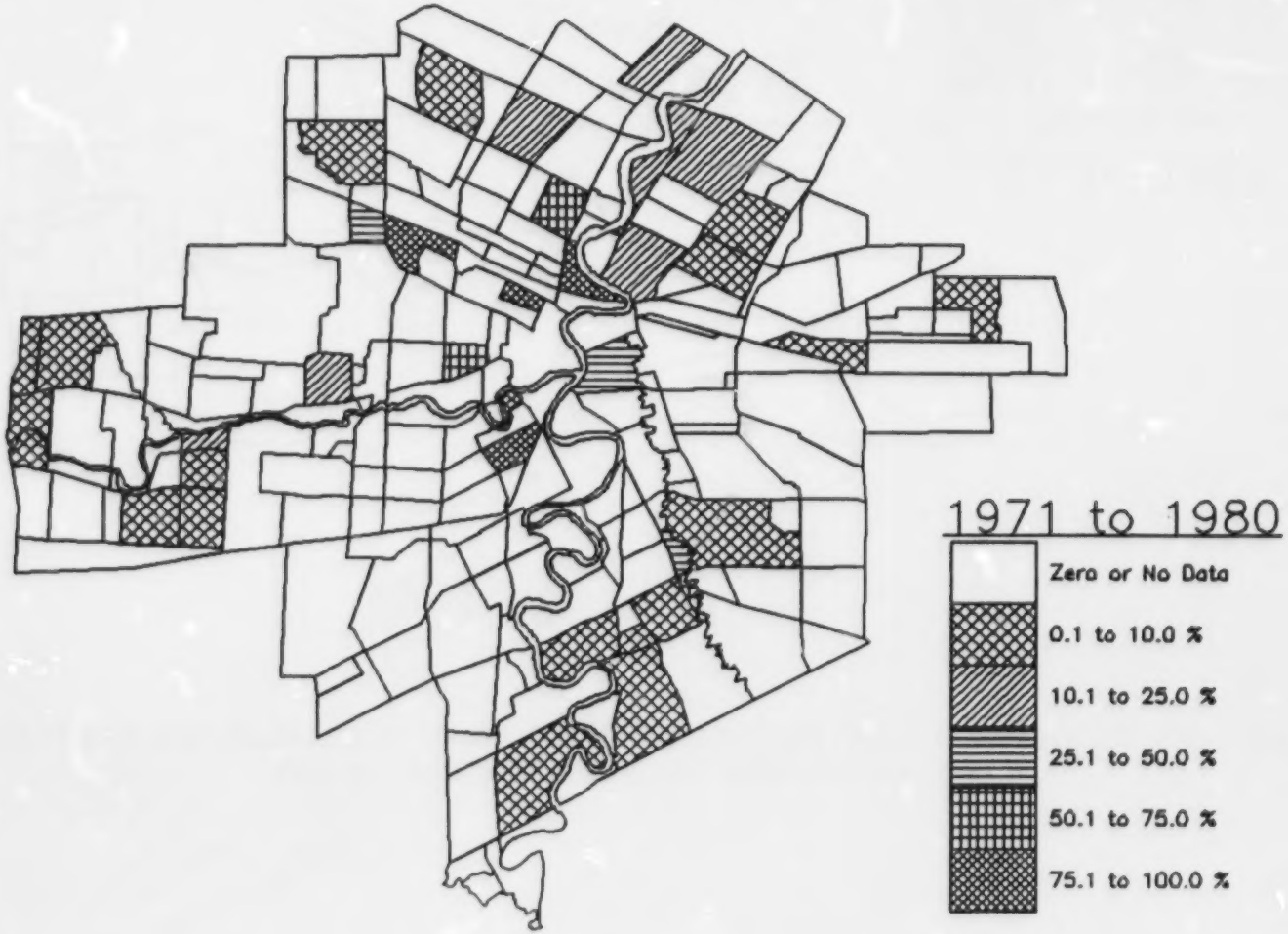


MAP 41 - WINNIPEG RENTAL HOUSING MARKET 1986:
PROPORTION RENTED OF TOTAL SINGLE DETACHED DWELLING UNITS; CONSTRUCTED 1946 - 1960

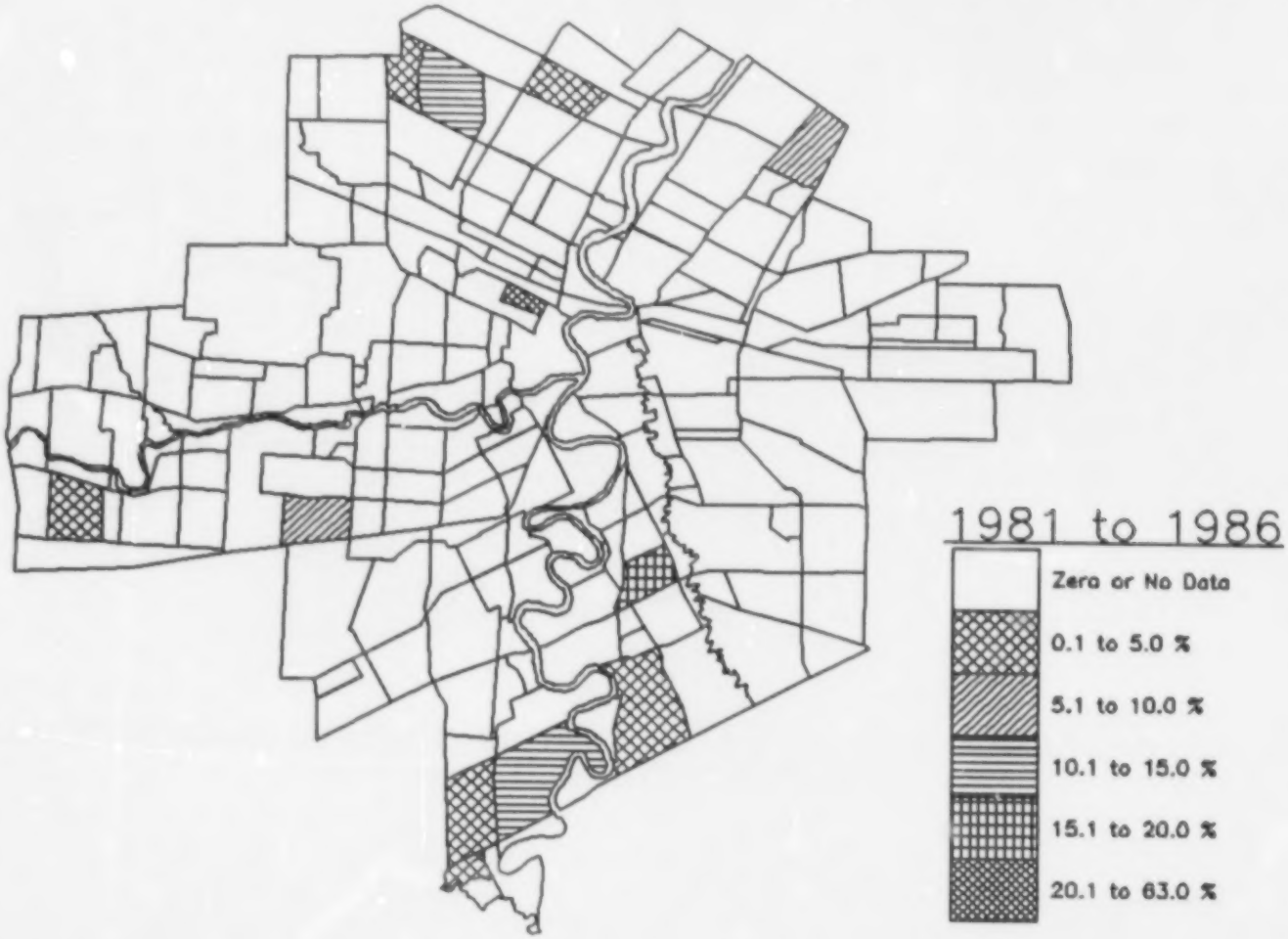


MAP 42 - WINNIPEG RENTAL HOUSING MARKET 1986:
PROPORTION RENTED OF TOTAL SINGLE DETACHED DWELLING UNITS; CONSTRUCTED 1961 - 1970

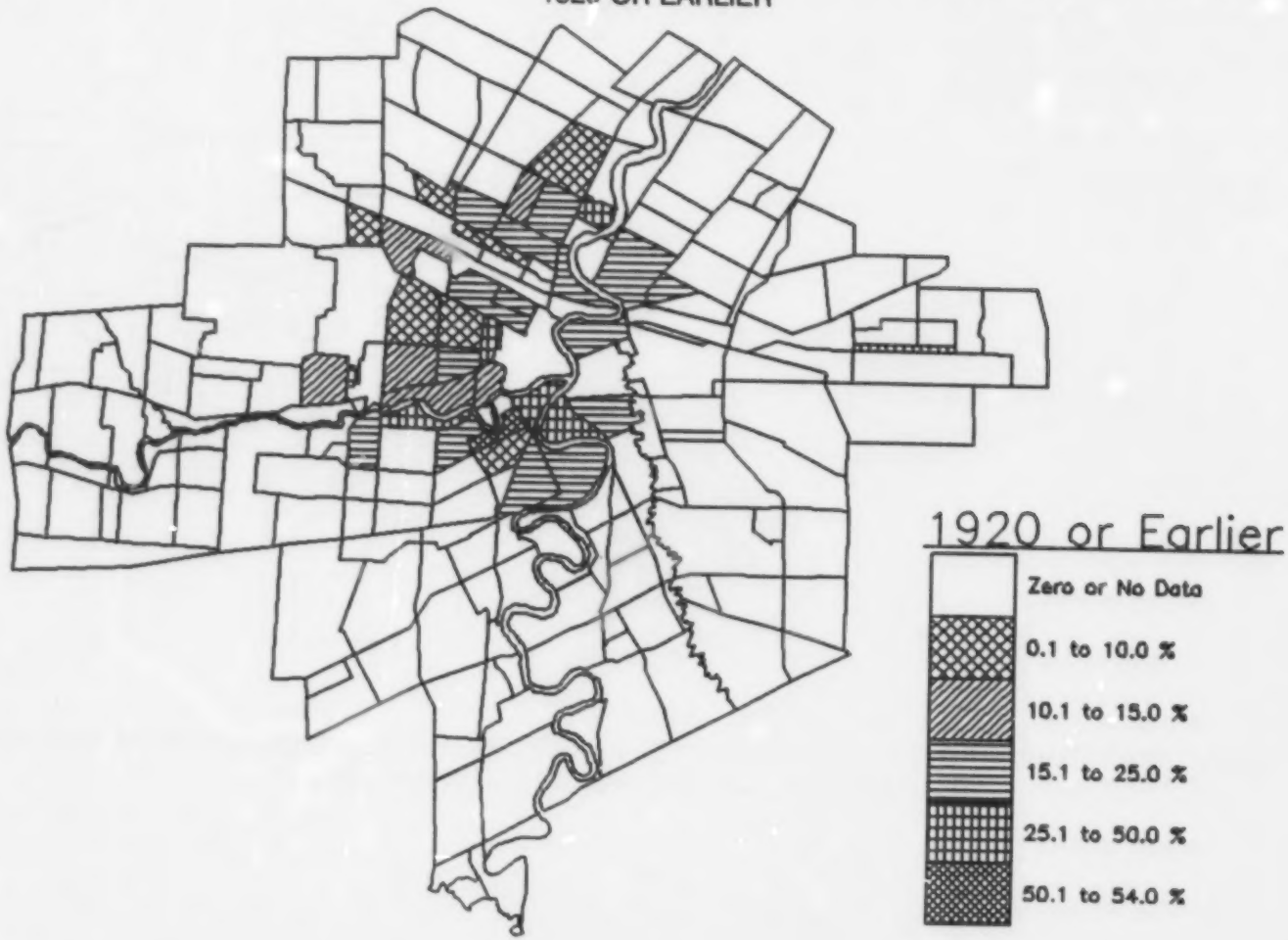
MAP 43 - WINNIPEG RENTAL HOUSING MARKET 1986:
PROPORTION RENTED OF TOTAL SINGLE DETACHED DWELLING UNITS; CONSTRUCTED 1971 - 1980



MAP 44 - WINNIPEG RENTAL HOUSING MARKET 1986:
PROPORTION RENTED OF TOTAL SINGLE DETACHED DWELLING UNITS; CONSTRUCTED 1981 - 1986



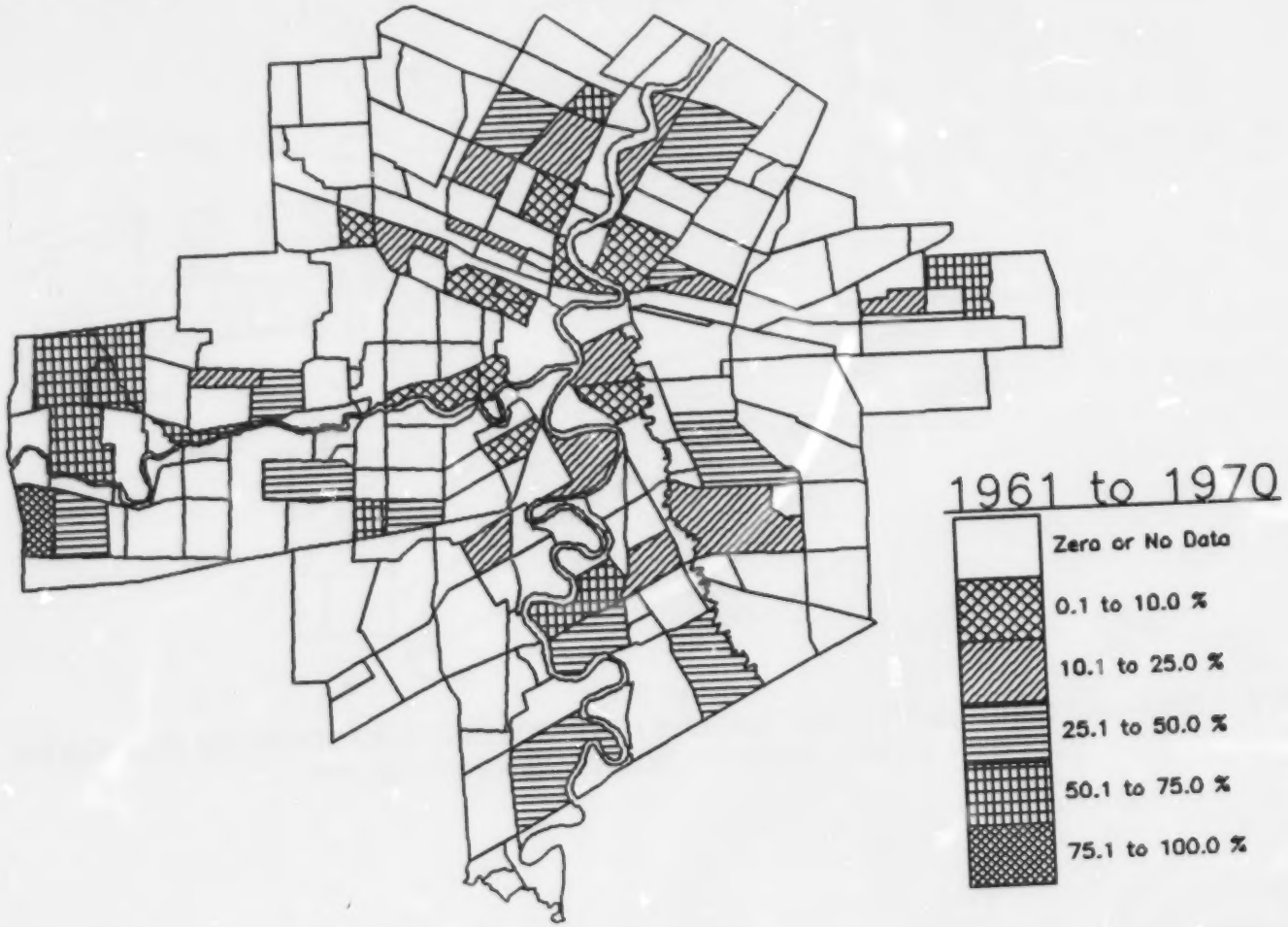
MAP 45 - WINNIPEG RENTAL HOUSING MARKET 1986:
PROPORTION BY PERIOD OF CONSTRUCTION, OF RENTED SINGLE DETACHED DWELLING UNITS;
1920 OR EARLIER



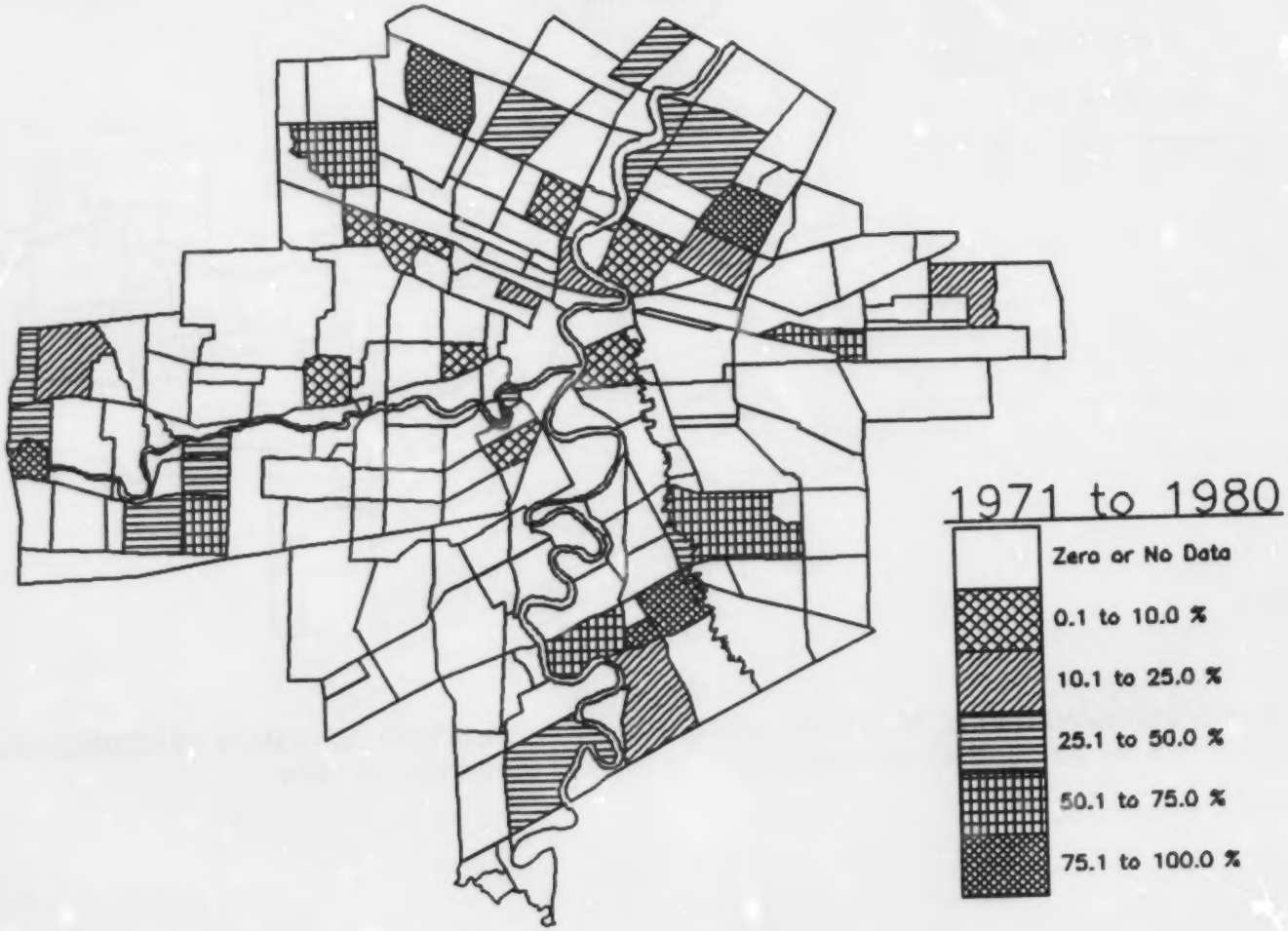
MAP 46 - WINNIPEG RENTAL HOUSING MARKET 1986:
PROPORTION BY PERIOD OF CONSTRUCTION, OF RENTED SINGLE DETACHED DWELLING UNITS;
1921 - 1945

MAP 47 - WINNIPEG RENTAL HOUSING MARKET 1986:
PROPORTION BY PERIOD OF CONSTRUCTION, OF RENTED SINGLE DETACHED DWELLING UNITS;
1946 - 1960

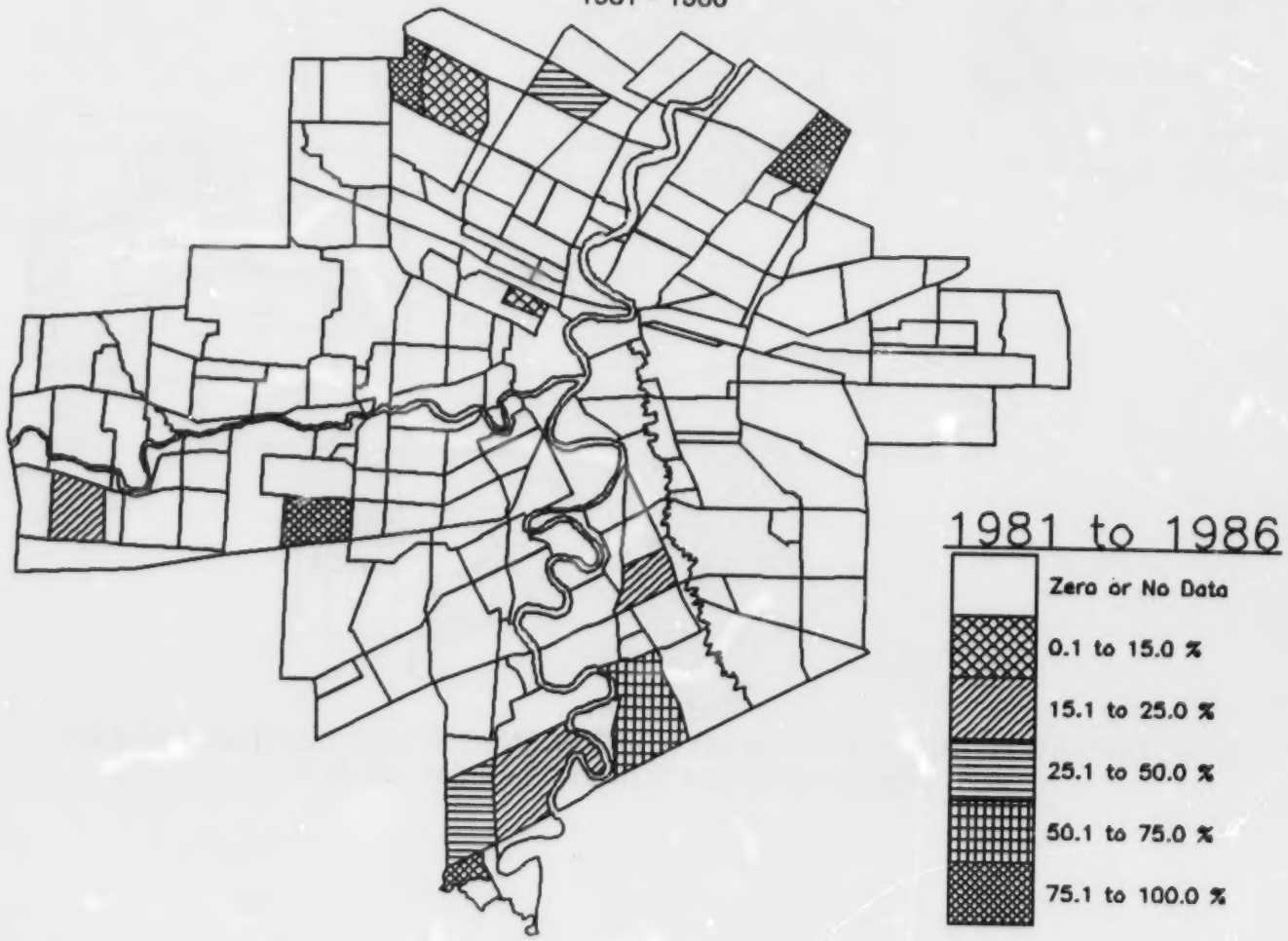
MAP 48 - WINNIPEG RENTAL HOUSING MARKET 1986:
PROPORTION BY PERIOD OF CONSTRUCTION, OF RENTED SINGLE DETACHED DWELLING UNITS;
1961 - 1970



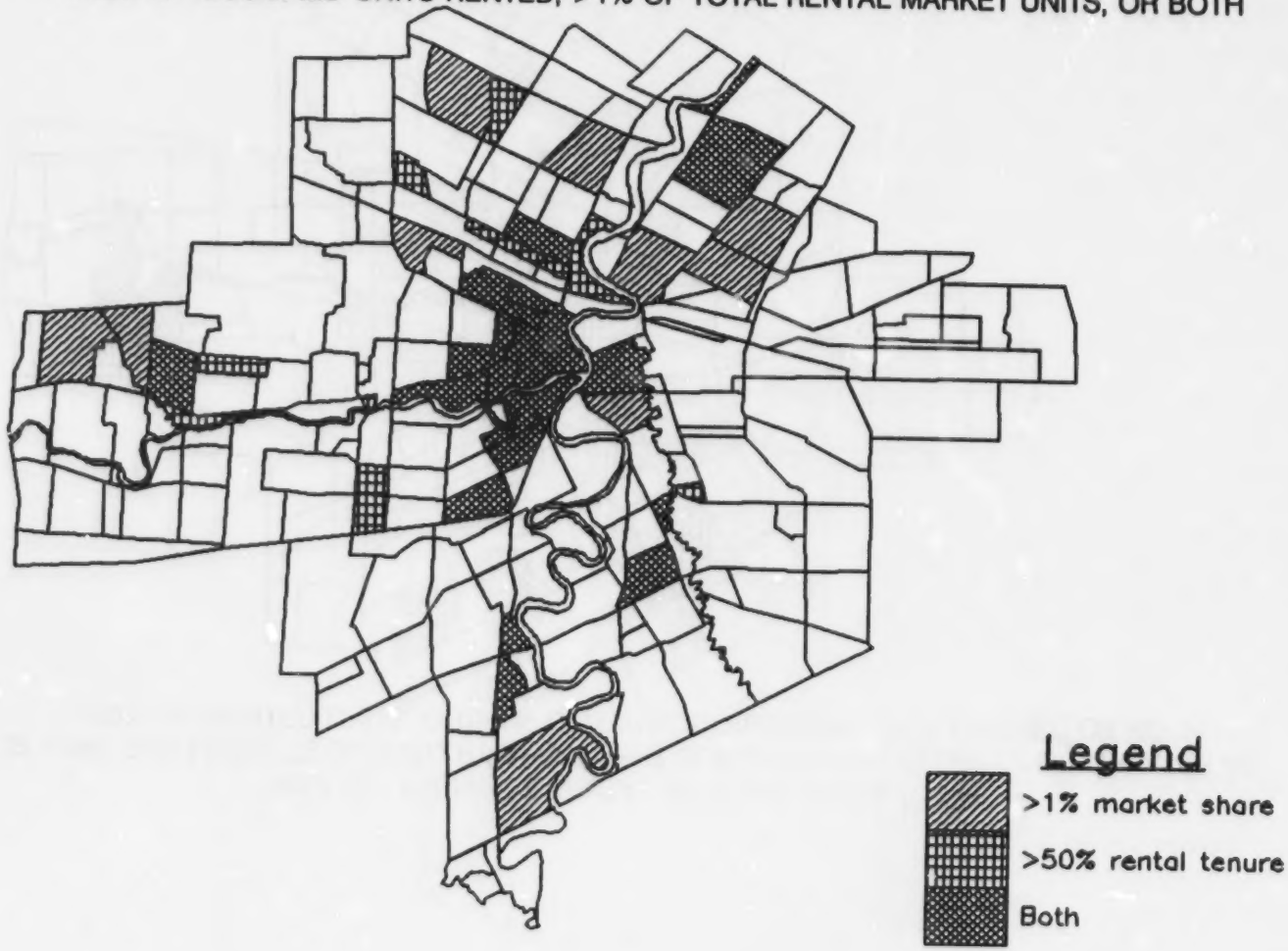
MAP 49 - WINNIPEG RENTAL HOUSING MARKET 1986:
PROPORTION BY PERIOD OF CONSTRUCTION, OF SINGLE DETACHED DWELLING UNITS;
1971 - 1980



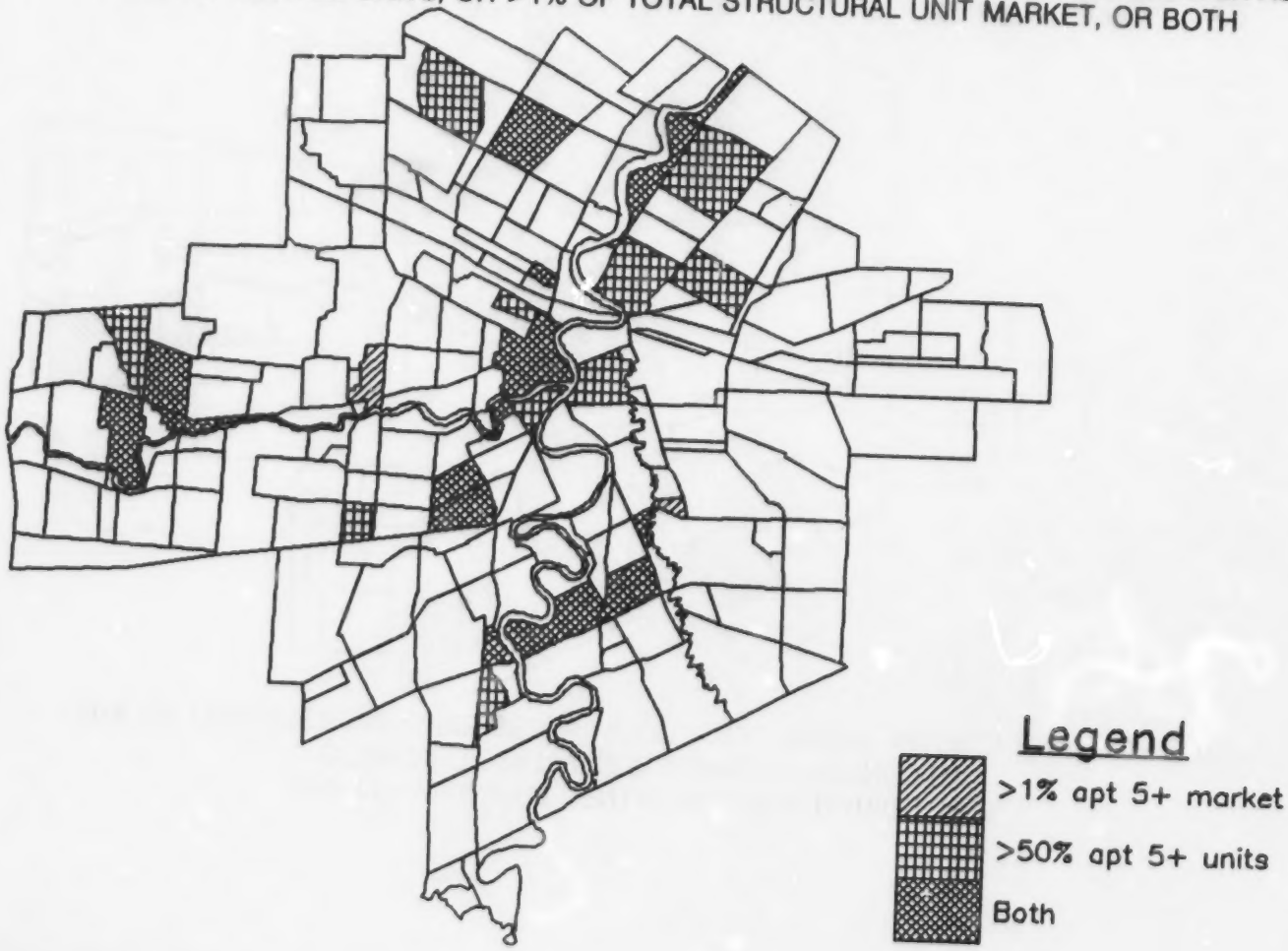
MAP 50 - WINNIPEG RENTAL HOUSING MARKET 1986:
PROPORTION BY PERIOD OF CONSTRUCTION, OF RENTED SINGLE DETACHED DWELLING UNITS;
1981 - 1986



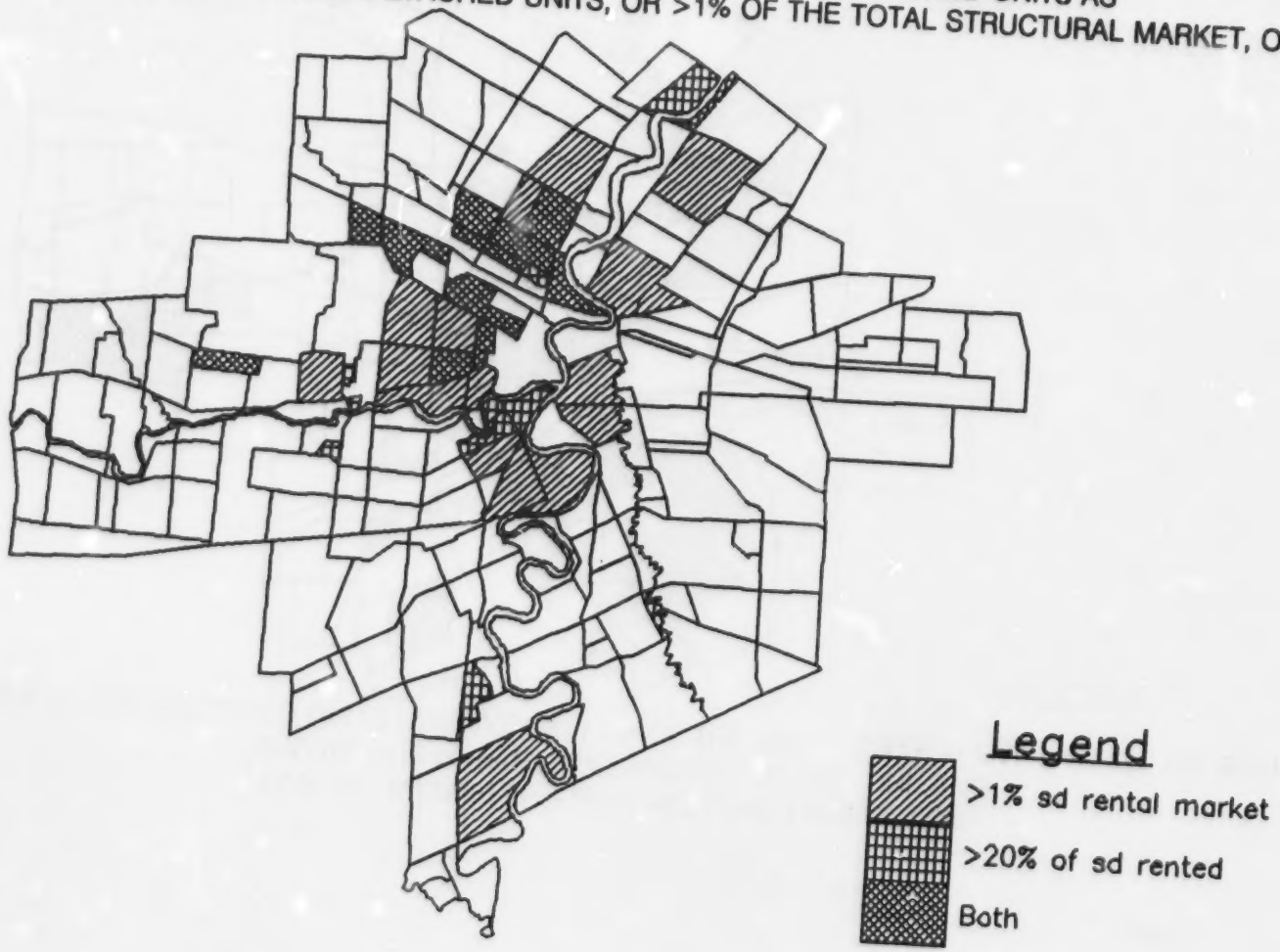
MAP 51 - WINNIPEG RENTAL HOUSING MARKET 1986:
COMBINED SPATIAL SUB-MARKETS DEFINED BY
>50% OF OCCUPIED UNITS RENTED, >1% OF TOTAL RENTAL MARKET UNITS, OR BOTH



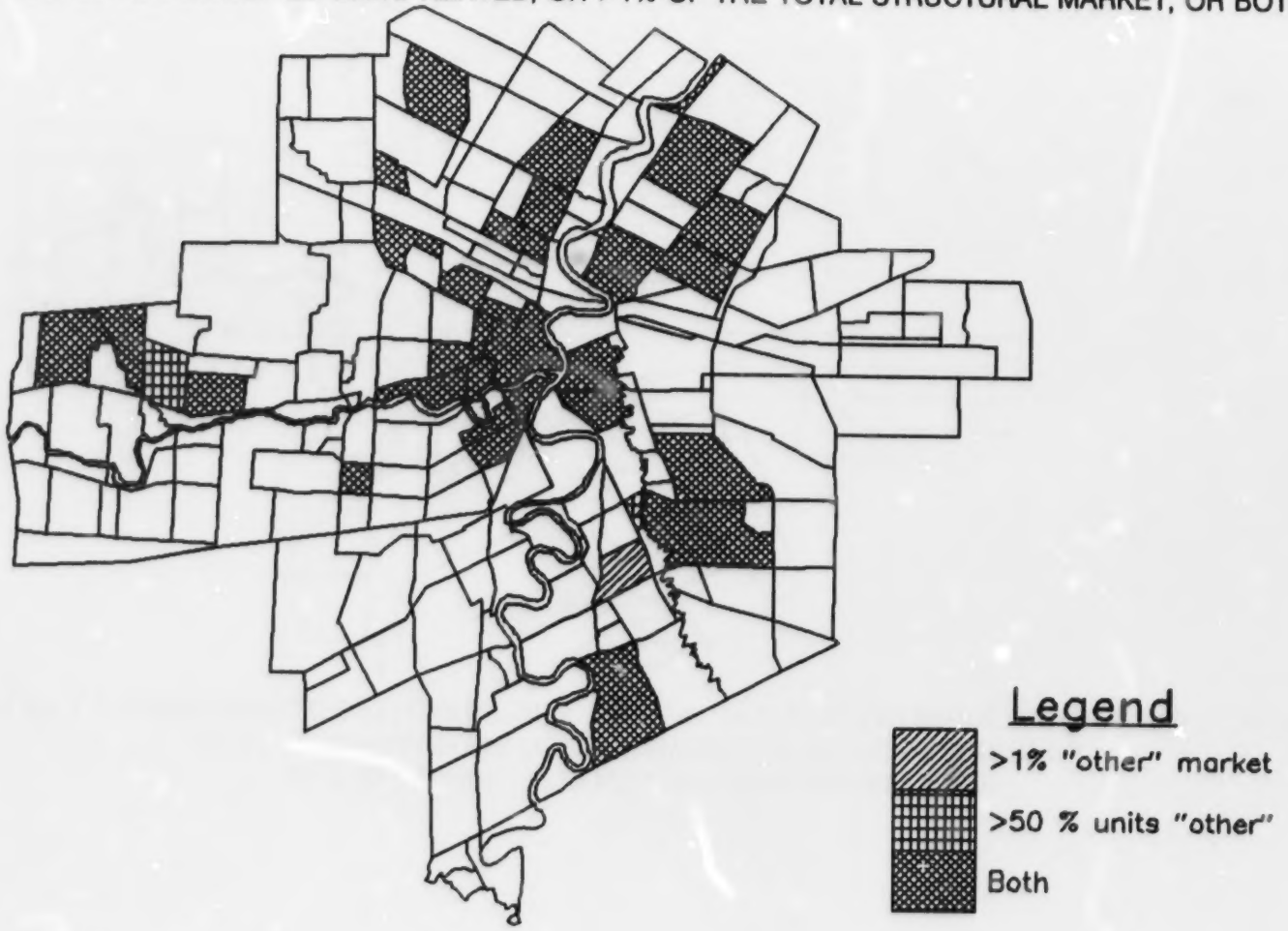
MAP 52 - WINNIPEG RENTAL HOUSING MARKET 1986:
SPATIAL SUB-MARKETS DEFINED BY APARTMENT BUILDINGS FIVE STOREYS OR GREATER AS
>50% OF RENTED UNITS, OR >1% OF TOTAL STRUCTURAL UNIT MARKET, OR BOTH



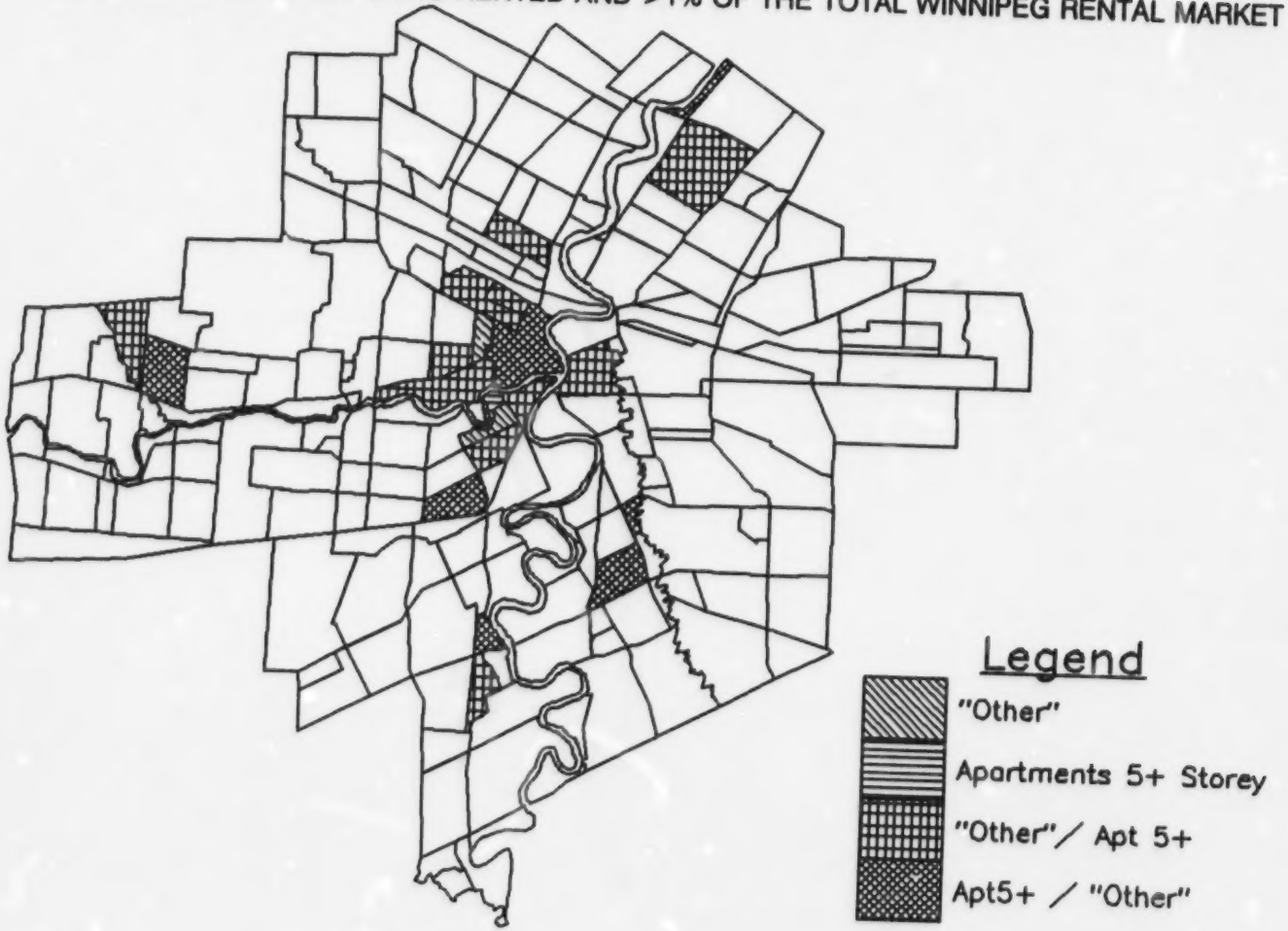
MAP 53 - WINNIPEG RENTAL HOUSING MARKET 1986:
SPATIAL SUB-MARKETS DEFINED BY SINGLE DETACHED UNITS AS
>20% OF OCCUPIED SINGLE DETACHED UNITS, OR >1% OF THE TOTAL STRUCTURAL MARKET, OR BOTH



MAP 54 - WINNIPEG RENTAL HOUSING MARKET 1986:
SPATIAL SUB-MARKETS DEFINED BY "OTHER" UNITS AS
>50% OF ALL OCCUPIED UNITS RENTED, OR >1% OF THE TOTAL STRUCTURAL MARKET, OR BOTH



MAP 55 - WINNIPEG RENTAL HOUSING MARKET 1986:
COMBINED SPATIAL / STRUCTURAL RENTAL SUB-MARKETS DEFINED BY
>50% OF ALL OCCUPIED UNITS RENTED AND >1% OF THE TOTAL WINNIPEG RENTAL MARKET



APPENDIX D

1986 RENTAL MARKET TABLES FOR STRUCTURAL TYPE BY NEIGHBOURHOOD CHARACTERIZATION AREA

TABLE ONE: RENTED OCCUPIED DWELLING UNITS BY NEIGHBOURHOOD CHARACTERIZATION AREA

NCA CODE	NEIGHBOURHOOD CHARACTERIZATION AREA	TOTAL NUMBER OF RENTED DWELLING UNITS	% OF OCCUPIED DWELLING UNITS RENTED	% OF WINNIPEG RENTED DWELLING UNITS
1.02	CENTENNIAL	890	81.28	0.97
1.03	MEMORIAL	3545	94.28	3.87
1.04	SPENCE	1690	81.45	1.84
1.05	W. ALEXANDER	990	59.28	1.08
1.06	EARL GREY	1160	52.85	1.27
1.07	EBBY WENTWORTH	115	33.82	0.13
1.08	DANIEL MCINTYRE	2130	53.58	2.32
1.09	LORD ROBERTS	810	35.14	0.88
1.10	MCMILLAN	1620	75.88	1.77
1.11	RIVER OSBORNE	2745	95.31	2.99
1.12	ST. MATTHEWS	1205	50.42	1.31
1.13	WESTMINSTER	1965	51.98	2.14
1.14	WESTON	990	42.40	1.08
1.15	MINTO	520	23.16	0.57
1.16	RIVERVIEW	400	22.66	0.44
1.17	ROSLYN	2145	72.96	2.34
1.18	SARGENT PARK	395	17.06	0.43
1.19	ARMSTRONG POINT	15	13.04	0.02
1.20	DOWNTOWN	6255	97.05	6.82
1.22	POLO PARK	190	100.00	0.21
2.01	KENSINGTON	30	25.00	0.03
2.02	BROOKLANDS	285	29.23	0.31

NCA CODE	NEIGHBOURHOOD CHARACTERIZATION AREA	TOTAL NUMBER OF RENTED DWELLING UNITS	% OF OCCUPPIED DWELLING UNITS RENTED	% OF WINNIPEG RENTED DWELLING UNITS
2.03	KING EDWARD	635	25.66	0.69
2.04	BRUCE PARK	505	48.10	0.55
2.05	DEER LODGE	205	12.46	0.22
2.06	PADDOCK	110	84.62	0.12
2.07	BIRCHWOOD	820	73.87	0.89
2.08	BOOTH	1595	61.70	1.74
2.09	BUCHANAN	290	26.61	0.32
2.10	CRESTVIEW	1135	32.06	1.24
2.11	GLENDALE	115	25.27	0.13
2.12	HERITAGE PARK	1360	64.00	1.48
2.13	JAMESWOOD	485	97.98	0.53
2.14	STURGEON CREEK	520	38.81	0.57
2.15	SILVER HEIGHTS	855	36.23	0.93
2.16	KIRKFIELD	505	40.56	0.55
2.17	WOODHAVEN	20	6.35	0.02
2.24	WESTWOOD	230	8.57	0.25
3.01	DUFFERIN	620	62.63	0.68
3.02	WILLIAM WHYTE	1515	56.95	1.65
3.03	BURROWS CENTRAL	510	26.22	0.56
3.04	LORD SELKIRK PK.	565	91.13	0.62
3.05	LUXTON	290	27.10	0.32
3.06	ST. JOHNS	1515	46.19	1.65
3.07	BURROWS KEEWATIN	700	66.35	0.76
3.08	INKSTER FARADAY	420	25.23	0.46
3.09	JEFFERSON	1370	35.49	1.49
3.10	MYNARSKI	180	36.00	0.20

NCA CODE	NEIGHBOURHOOD CHARACTERIZATION AREA	TOTAL NUMBER OF RENTED DWELLING UNITS	% OF OCCUPPIED DWELLING UNITS RENTED	% OF WINNIPEG RENTED DWELLING UNITS
3.11	N. POINT DOUGLAS	555	53.62	0.61
3.12	ROBERTSON	85	4.91	0.09
3.13	ST. JOHNS PARK	145	52.73	0.16
3.14	SEVEN OAKS	170	13.71	0.19
3.15	SHAUGHNESSY PARK	270	28.42	0.29
3.16	GARDEN CITY	605	24.74	0.66
3.17	THE MAPLES	1425	33.14	1.55
3.18	MARGARET PARK	375	37.50	0.41
3.19	INKSTER GARDENS	40	7.48	0.04
3.20	LEILA MCPHILLIPS	285	77.03	0.31
3.21	MANDALAY WEST	65	7.47	0.07
3.22	RIVERGROVE	25	23.81	0.03
3.23	RIVERBEND	30	12.77	0.03
3.24	TEMPLETON SINCLAIR	565	40.94	0.62
3.25	TYNDALL PARK	425	15.04	0.46
4.01	CHALMERS	1915	46.26	2.09
4.02	MELROSE	95	17.43	0.10
4.03	TALBOT GREY	335	29.39	0.37
4.04	VICTORIA WEST	160	15.02	0.17
4.05	EAST ELMWOOD	310	24.22	0.34
4.06	KERN PARK	120	17.14	0.13
4.07	MUNROE WEST	325	22.97	0.35
4.08	RADISSON	55	4.23	0.06
4.09	WEST ELMWOOD	215	22.16	0.23
4.10	KILDARE REDONDA	595	22.97	0.65
4.11	KILDONAN DRIVE	820	36.36	0.89

NCA CODE	NEIGHBOURHOOD CHARACTERIZATION AREA	TOTAL NUMBER OF RENTED DWELLING UNITS	% OF OCCUPPIED DWELLING UNITS RENTED	% OF WINNIPEG RENTED DWELLING UNITS
4.12	MUNROE EAST	1415	40.60	1.54
4.13	ROSSMERE A	3015	51.98	3.29
4.14	CANTERBURY PARK	155	17.51	0.17
4.15	MEADOWS	90	9.23	0.10
4.16	MISSION GARDENS	145	18.35	0.16
4.18	RIVER EAST	250	8.67	0.27
4.19	SPRINGFIELD NOR.	85	7.59	0.09
4.20	SPRINGFIELD SOU.	45	10.00	0.05
4.21	VALHALLA	1760	95.65	1.92
4.22	VALLEY GARDENS	1005	37.29	1.10
4.34	ROSSMERE B	245	14.37	0.27
5.01	N. ST. BONIFACE	375	49.34	0.41
5.02	CEN ST. BONIFACE	2395	72.69	2.61
5.03	TISSOT	0	0.00	0.00
5.04	ALPINE PLACE	2190	97.99	2.39
5.05	ARCHWOOD	55	13.92	0.06
5.06	DUFRESNE	60	30.77	0.07
5.07	ELM PARK	100	14.71	0.11
5.08	GLENWOOD	220	12.83	0.24
5.09	HOLDEN	35	41.18	0.04
5.10	LAVALEE	290	58.00	0.32
5.11	MAGINOT	270	40.60	0.29
5.12	NORBERRY	125	23.15	0.14
5.13	NORWOOD EAST	925	44.26	1.01
5.14	NORWOOD WEST	330	25.10	0.36
5.15	ST. GEORGE	190	15.45	0.21

NCA CODE	NEIGHBOURHOOD CHARACTERIZATION AREA	TOTAL NUMBER OF RENTED DWELLING UNITS	% OF OCCUPPIED DWELLING UNITS RENTED	% OF WINNIPEG RENTED DWELLING UNITS
5.16	VARENNES	140	29.47	0.15
5.17	WORTHINGTON	1925	73.75	2.10
5.18	KINGSTON CRES.	0	0.00	0.00
5.19	MINNETONKA	130	9.63	0.14
5.20	NIAKWA PARK	210	59.15	0.23
5.21	PULBERRY	485	26.94	0.53
5.22	SOUTHDALE	650	23.34	0.71
5.23	VICTORIA CRES.	0	0.00	0.00
5.24	VISTA	65	12.50	0.07
5.25	WINDSOR PARK	660	17.41	0.72
5.26	MEADOWOOD	145	9.39	0.16
5.28	RICHFIELD	95	54.29	0.10
5.29	RIVER PARK SOUTH	740	27.06	0.81
5.30	DAKOTA CROSSING	20	4.49	0.02
5.46	ISLAND LAKES	0	0.00	0.00
6.01	CRESCENTWOOD	210	21.65	0.23
6.02	BEAUMONT	110	12.09	0.12
6.04	GRANT PARK	970	71.59	1.06
6.05	MAYBANK	300	29.13	0.33
6.06	POINT ROAD	120	15.79	0.13
6.07	ROCKWOOD	800	43.96	0.87
6.08	VARSITY VIEW	305	35.06	0.33
6.09	WILDWOOD	20	4.82	0.02
6.10	AGASSIZ	0	0.00	0.00
6.11	CENTRAL RIVER H.	180	12.41	0.20
6.12	CRESCENT PARK	160	18.50	0.17

NCA CODE	NEIGHBOURHOOD CHARACTERIZATION AREA	TOTAL NUMBER OF RENTED DWELLING UNITS	% OF OCCUPPIED DWELLING UNITS RENTED	% OF WINNIPEG RENTED DWELLING UNITS
6.13	EDGELAND	355	58.20	0.39
6.14	ERIC COY	15	1.86	0.02
6.15	FORT RICHMOND	1450	35.54	1.58
6.16	J. B. MITCHELL	755	70.89	0.82
6.17	MARLTON	105	35.00	0.11
6.18	MATHERS	800	57.76	0.87
6.19	TUXEDO	200	22.99	0.22
6.20	NORTH RIVER HEI.	125	5.64	0.14
6.21	OLD TUXEDO	10	3.33	0.01
6.22	RIDGEDALE	30	15.38	0.03
6.23	RIVERWEST PARK	80	16.49	0.09
6.24	ROBLIN PARK	0	0.00	0.00
6.25	ST. NORBERT	35	9.46	0.04
6.26	S. JOHN FRANKLIN	175	16.13	0.19
6.27	SOUTHBOINE	195	46.99	0.21
6.28	SOUTH RIVER HEI.	125	12.32	0.14
6.30	VIALOUX	255	57.30	0.28
6.31	WELLINGTON CRES.	60	10.17	0.07
6.32	WESTDALE	385	23.40	0.42
6.33	BETSWORTH	205	14.59	0.22
6.34	LINDEN WO	0	0.00	0.00
6.35	CLOUTIER DRIVE	40	40.00	0.04
6.36	ELMHURST	185	13.45	0.20
6.38	RICHMOND WEST	455	41.36	0.50
6.40	MONTCALM	1745	96.41	1.90
6.41	RICHMOND LAKES	20	3.70	0.02

NCA CODE	NEIGHBOURHOOD CHARACTERIZATION AREA	TOTAL NUMBER OF RENTED DWELLING UNITS	% OF OCCUPPIED DWELLING UNITS RENTED	% OF WINNIPEG RENTED DWELLING UNITS
6.42	PARC LA SALLE	100	17.39	0.11
6.43	PEMBINA STRIP	1230	100.00	1.34
6.45	SOUTH TUXEDO	415	46.89	0.45
6.46	WAVERLEY HEIGHTS	345	19.77	0.38

TABLE TWO: RENTED SINGLE-DETACHED DWELLING UNITS BY NEIGHBOURHOOD CHARACTERIZATIOON AREA

NCA CODE	NEIGHBOURHOOD CHARACTERIZATION	TOTAL NUMBER OF RENTED SINGLE DETACHED UNITS	% OF NCA RENTED UNITS WHICH ARE SINGLE DETACHED	% OF WINNIPEG RENTED SINGLE DETACHED UNITS	% OF NCA SINGLE DETACHED UNITS WHICH ARE RENTED
1.02	CENTENNIAL	210	23.60	1.79	56.00
1.03	MEMORIAL	85	2.40	0.73	39.53
1.04	SPENCE	165	9.76	1.41	38.82
1.05	WEST ALEXANDER	150	15.15	1.28	21.74
1.06	EARL GREY	200	17.24	1.71	17.78
1.07	EBBY WENTWORTH	40	34.78	0.34	15.38
1.08	DANIEL MCINTYRE	380	17.84	3.25	18.67
1.09	LORD ROBERTS	250	30.86	2.14	16.13
1.10	MCMILLAN	65	4.01	0.56	26.53
1.11	RIVER OSBORNE	85	3.10	0.73	51.52
1.12	ST. MATTHEWS	275	22.82	2.35	20.91
1.13	WESTMINSTER	335	17.05	2.86	18.21
1.14	WESTON	330	33.33	2.82	20.12
1.15	MINTO	235	45.19	2.01	12.40
1.16	RIVERVIEW	125	31.25	1.07	8.56
1.17	ROSLYN	25	1.17	0.21	50.00
1.18	SARGENT PARK	130	32.91	1.11	6.52
1.19	ARMSTRONG POINT	0	0.00	0.00	0.00
1.22	POLO PARK	10	5.26	0.09	0.00
2.01	KENSINGTON	30	0.00	0.26	25.00
2.02	BROOKLANDS	250	87.72	2.14	26.74
2.03	KING EDWARD	310	48.82	2.65	14.59
2.04	BRUCE PARK	60	11.88	0.51	10.17

NCA CODE	NEIGHBOURHOOD CHARACTERIZATION AREA	TOTAL NUMBER OF RENTED SINGLE-DETACHED UNITS	% OF NCA RENTED UNITS WHICH ARE SINGLE-DETACHED	% OF WINNIPEG RENTED SINGLE-DETACHED UNITS	% OF NCA SINGLE-DETACHED UNITS WHICH ARE RENTED
2.05	DEER LODGE	45	21.95	0.38	3.02
2.06	PADDOCK	10	9.09	0.09	33.33
2.07	BIRCHWOOD	50	6.10	0.43	14.93
2.08	BOOTH	30	1.88	0.26	3.21
2.09	BUCHANAN	20	6.90	0.17	3.28
2.10	CRESTVIEW	55	4.85	0.47	2.74
2.11	GLENDALE	20	17.39	0.17	5.88
2.12	HERITAGE PARK	25	1.84	0.21	3.38
2.13	JAMESWOOD	465	95.88	3.97	98.94
2.14	STURGEON CREEK	45	8.65	0.38	5.33
2.15	SILVER HEIGHTS	50	5.85	0.43	3.30
2.16	KIRKFIELD	35	6.93	0.30	5.11
2.17	WOODHAVEN	20	0.00	0.17	6.45
2.24	WESTWOOD	50	21.74	0.43	2.04
3.01	DUFFERIN	235	37.90	2.01	42.34
3.02	WILLIAM WHYTE	485	32.01	4.15	32.88
3.03	BURROWS CENTRAL	325	63.73	2.78	19.12
3.04	LORD SELKIRK PARK	25	4.42	0.21	38.46
3.05	LUXTON	90	31.03	0.77	11.32
3.06	ST. JOHNS	390	25.74	3.33	20.58
3.07	BURROWS KEEWATIN	45	6.43	0.38	11.84
3.08	INKSTER FARADAY	180	42.86	1.54	13.33
3.09	JEFFERSON	190	13.87	1.62	7.31
3.10	MYNARSKI	0	0.00	0.00	0.00

NCA CODE	NEIGHBOURHOOD CHARACTERIZATION AREA	TOTAL NUMBER OF RENTED SINGLE-DETACHED UNITS	% OF NCA RENTED UNITS WHICH ARE SINGLE-DETACHED	% OF WINNIPEG RENTED SINGLE-DETACHED UNITS	% OF NCA SINGLE-DETACHED UNITS WHICH ARE RENTED
3.11	NORTH POINT DOUGLAS	190	34.23	1.62	33.04
3.12	ROBERTSON	70	82.35	0.60	4.17
3.13	ST. JOHNS PARK	0	0.00	0.00	0.00
3.14	SEVEN OAKS	65	38.24	0.56	5.80
3.15	SHAUGHNESSY PARK	115	42.59	0.98	14.74
3.16	GARDEN CITY	85	14.05	0.73	4.49
3.17	THE MAPLES	105	7.37	0.90	4.34
3.18	MARGARET PARK	15	4.00	0.13	2.73
3.19	INKSTER GARDENS	0	0.00	0.00	0.00
3.20	LEILA MCPHILLIPS	0	0.00	0.00	0.00
3.21	MANDALAY WEST	30	46.15	0.26	3.77
3.22	RIVERGROVE	15	60.00	0.13	60.00
3.23	RIVERBEND	25	83.33	0.21	13.89
3.24	TEMPLETON SINCLAIR	20	3.54	0.17	3.17
3.25	TYNDALL PARK	30	7.06	0.26	1.43
4.01	CHALMERS	390	20.37	3.33	15.60
4.02	MELROSE	60	63.16	0.51	12.90
4.03	TALBOT GREY	125	37.31	1.07	14.20
4.04	VICTORIA WEST	60	37.50	0.51	6.25
4.05	EAST ELMWOOD	85	27.42	0.73	9.44
4.06	KERN PARK	30	25.00	0.26	5.13
4.07	MUNROE WEST	45	13.85	0.38	3.98
4.08	RADISSON	35	63.64	0.30	2.86
4.09	WEST ELMWOOD	95	44.19	0.81	11.80
4.10	KILDARE REDONDA	75	12.61	0.64	4.12

NCA CODE	NEIGHBOURHOOD CHARACTERIZATION AREA	TOTAL NUMBER OF RENTED SINGLE-DETACHED UNITS	% OF NCA RENTED UNITS WHICH ARE SINGLE-DETACHED	% OF WINNIPEG RENTED SINGLE-DETACHED UNITS	% OF NCA SINGLE-DETACHED UNITS WHICH ARE RENTED
4.11	KILDONAN DRIVE	85	10.37	0.73	5.63
4.12	MUNROE EAST	75	5.30	0.64	3.85
4.13	ROSSMERE A	130	4.31	1.11	5.07
4.14	CANTERBURY PARK	0	0.00	0.00	0.00
4.15	MEADOWS	0	0.00	0.00	0.00
4.16	MISSION GARDENS	20	13.79	0.17	3.77
4.18	RIVER EAST	20	8.00	0.17	0.81
4.19	SPRINGFIELD NORTH	60	70.59	0.51	5.91
4.20	SPRINGFIELD SOUTH	0	0.00	0.00	0.00
4.21	VALHALLA	10	0.57	0.09	20.00
4.22	VALLEY GARDENS	25	2.49	0.21	1.89
4.34	ROSSMERE B	75	30.61	0.64	5.02
5.01	NORTH ST. BONIFACE	75	20.00	0.64	18.52
5.02	CENTRAL ST. BONIFACE	165	6.89	1.41	18.54
5.03	TISSOT	0	0.00	0.00	0.00
5.04	ALPINE PLACE	0	0.00	0.00	0.00
5.05	ARCHWOOD	45	81.82	0.38	12.50
5.06	DUFRESNE	25	41.67	0.21	17.86
5.07	ELM PARK	30	30.00	0.26	5.00
5.08	GLENWOOD	105	47.73	0.90	6.80
5.09	HOLDEN	0	0.00	0.00	0.00
5.10	LAVALEE	30	10.34	0.26	13.64
5.11	MAGINOT	10	3.70	0.09	9.09
5.12	NORBERRY	30	24.00	0.26	6.82

NCA CODE	NEIGHBOURHOOD CHARACTERIZATION AREA	TOTAL NUMBER OF RENTED SINGLE-DETACHED UNITS	% OF NCA RENTED UNITS WHICH ARE SINGLE-DETACHED	% OF WINNIPEG RENTED SINGLE-DETACHED UNITS	% OF NCA SINGLE-DETACHED UNITS WHICH ARE RENTED
5.13	NORWOOD EAST	125	13.51	1.07	10.50
5.14	NORWOOD WEST	40	12.12	0.34	4.04
5.15	ST. GEORGE	65	34.21	0.56	5.99
5.16	VARENNES	45	32.14	0.38	12.33
5.17	WORTHINGTON	115	5.97	0.98	17.16
5.18	KINGSTON CRESCENT	0	0.00	0.00	0.00
5.19	MINNETONKA	35	26.92	0.30	2.82
5.20	NIAKWA PARK	0	0.00	0.00	0.00
5.21	PULBERRY	35	7.22	0.30	2.81
5.22	SOUTHDALE	45	6.92	0.38	2.27
5.23	VICTORIA CRESCENT	0	0.00	0.00	0.00
5.24	VISTA	25	38.46	0.21	5.21
5.25	WINDSOR PARK	70	10.61	0.60	2.26
5.26	MEADOWOOD	25	17.24	0.21	2.13
5.28	RICHFIELD	15	15.79	0.13	37.50
5.29	RIVER PARK SOUTH	60	8.11	0.51	3.18
5.30	DAKOTA CROSSING	20	0.00	0.17	4.55
5.46	ISLAND LAKES	0	0.00	0.00	0.00
6.01	CRESCENTWOOD	60	28.57	0.51	7.95
6.02	BEAUMONT	60	54.55	0.51	7.10
6.04	GRANT PARK	35	3.61	0.30	10.77
6.05	MAYBANK	25	8.33	0.21	4.39
6.06	POINT ROAD	45	37.50	0.38	6.82
6.07	ROCKWOOD	70	8.75	0.60	6.70

NCA CODE	NEIGHBOURHOOD CHARACTERIZATION AREA	TOTAL NUMBER OF RENTED SINGLE-DETACHED UNITS	% OF NCA RENTED UNITS WHICH ARE SINGLE-DETACHED	% OF WINNIPEG RENTED SINGLE-DETACHED UNITS	% OF NCA SINGLE-DETACHED UNITS WHICH ARE RENTED
6.08	VARSITY VIEW	40	13.11	0.34	6.78
6.09	WILDWOOD	15	75.00	0.13	3.80
6.10	AGASSIZ	0	0.00	0.00	0.00
6.11	CENTRAL RIVER HEIGHTS	40	22.22	0.34	3.24
6.12	CRESCENT PARK	50	31.25	0.43	6.71
6.13	EDGELAND	50	14.08	0.43	90.91
6.14	ERIC COY	20	33.33	0.17	2.48
6.15	FORT RICHMOND	135	9.31	1.15	5.43
6.16	J. B. MITCHELL	20	2.65	0.17	6.45
6.17	MARLTON	0	0.00	0.00	0.00
6.18	MATHERS	35	4.38	0.30	9.21
6.19	TUXEDO	95	47.50	0.81	12.50
6.20	NORTH RIVER HEIGHTS	80	64.00	0.68	3.70
6.21	OLD TUXEDO	10	0.00	0.09	3.28
6.22	RIDGEDALE	0	0.00	0.00	0.00
6.23	RIVERWEST PARK	25	31.25	0.21	6.58
6.24	ROBLIN PARK	0	0.00	0.00	0.00
6.25	ST. NORBERT	20	57.14	0.17	6.15
6.26	SIR JOHN FRANKLIN	80	45.71	0.68	8.21
6.27	SOUTHBOINE	15	7.69	0.13	6.38
6.28	SOUTH RIVER HEIGHTS	35	28.00	0.30	3.87
6.30	VIALOUX	20	7.84	0.17	11.11
6.31	WELLINGTON CRESCENT	35	58.33	0.30	6.36

NCA CODE	NEIGHBOURHOOD CHARACTERIZATION AREA	TOTAL NUMBER OF RENTED SINGLE-DETACHED UNITS	% OF NCA RENTED UNITS WHICH ARE SINGLE-DETACHED	% OF WINNIPEG RENTED SINGLE-DETACHED UNITS	% OF NCA SINGLE-DETACHED UNITS WHICH ARE RENTED
6.32	WESTDALE	20	5.19	0.17	2.63
6.33	BETSWORTH	40	19.51	0.34	3.39
6.34	LINDEN WOODS	0	0.00	0.00	0.00
6.35	CLOUTIER DRIVE	0	0.00	0.00	0.00
6.36	ELMHURST	25	13.51	0.21	2.07
6.38	RICHMOND WEST	20	4.40	0.17	3.60
6.40	MONTCALM	15	0.86	0.13	27.27
6.41	RICHMOND LAKES	15	75.00	0.13	2.91
6.42	PARC LA SALLE	0	0.00	0.00	0.00
6.43	PEMBINA STRIP	10	0.81	0.09	0.00
6.45	SOUTH TUXEDO	15	3.61	0.13	4.62
6.46	WAVERLEY HEIGHTS	0	0.00	0.00	0.00

TABLE THREE: RENTED DWELLING UNITS IN APARTMENT BUILDINGS FIVE STOREYS OR GREATER BY NEIGHBOURHOOD CHARACTERIZATION AREA

NCA CODE	NEIGHBOURHOOD CHARACTERIZATION AREA	TOTAL NUMBER OF 5+ STOREY APARTMENT UNITS	% OF NCA RENTED UNITS WHICH ARE 5+ STOREY APARTMENT	% OF WINNIPEG RENTED 5+ STOREY APARTMENT UNITS
1.02	CENTENNIAL	295	33.15	1.05
1.03	MEMORIAL	1015	28.63	3.63
1.04	SPENCE	175	10.36	0.63
1.05	WEST ALEXANDER	160	16.16	0.57
1.06	EARL GREY	230	19.83	0.82
1.07	EBBY WENTWORTH	0	0.00	0.00
1.08	DANIEL MCINTYRE	400	18.78	1.43
1.09	LORD ROBERTS	195	24.07	0.70
1.10	MCMILLAN	210	12.96	0.75
1.11	RIVER OSBORNE	1165	42.44	4.16
1.12	ST. MATTHEWS	0	0.00	0.00
1.13	WESTMINSTER	90	4.58	0.32
1.14	WESTON	80	8.08	0.29
1.15	MINTO	105	20.19	0.38
1.16	RIVERVIEW	0	0.00	0.00
1.17	ROSLYN	2005	93.47	7.16
1.18	SARGENT PARK	0	0.00	0.00
1.19	ARMSTRONG POINT	0	0.00	0.00
1.20	DOWNTOWN	4170	66.66	14.80
1.22	POLO PARK	165	86.84	0.59
2.01	KENSINGTON	0	0.00	0.00
2.02	BROOKLANDS	35	12.28	0.13

NCA CODE	NEIGHBOURHOOD CHARACTERIZATION AREA	TOTAL NUMBER OF 5+ STOREY APARTMENT UNITS	% OF NCA RENTED UNITS WHICH ARE 5+ STOREY APARTMENT	% OF WINNIPEG RENTED 5+ STOREY APARTMEN T UNITS
2.03	KING EDWARD	260	40.94	0.93
2.04	BRUCE PARK	235	46.53	0.84
2.05	DEER LODGE	40	19.51	0.14
2.06	PADDOCK	0	0.00	0.00
2.07	BIRCHWOOD	670	81.71	2.39
2.08	BOOTH	840	52.66	3.00
2.09	BUCHANAN	0	0.00	0.00
2.10	CRESTVIEW	95	8.37	0.34
2.11	GLENDALE	0	0.00	0.00
2.12	HERITAGE PARK	435	31.99	1.55
2.13	JAMESWOOD	0	0.00	0.00
2.14	STURGEON CREEK	140	26.92	0.50
2.15	SILVER HEIGHTS	250	29.24	0.89
2.16	KIRKFIELD	425	84.16	1.52
2.17	WOODHAVEN	0	0.00	0.00
2.24	WESTWOOD	0	0.00	0.00
3.01	DUFFERIN	135	21.77	0.48
3.02	WILLIAM WHYTE	190	12.54	0.68
3.03	BURROWS CENTRAL	0	0.00	0.00
3.04	LORD SELKIRK PARK	310	54.87	1.11
3.05	LUXTON	0	0.00	0.00
3.06	ST. JOHNS	115	7.59	0.41
3.07	BURROWS KEEWATIN	0	0.00	0.00
3.08	INKSTER FARADAY	75	17.86	0.27
3.09	JEFFERSON	190	13.87	0.68
3.10	MYNARSKI	0	0.00	0.00

NCA CODE	NEIGHBOURHOOD CHARACTERIZATION AREA	TOTAL NUMBER OF 5+ STOREY APARTMENT UNITS	% OF NCA RENTED UNITS WHICH ARE 5+ STOREY APARTMENT	% OF WINNIPEG RENTED 5+ STOREY APARTMENT UNITS
3.11	NORTH POINT DOUGLAS	110	19.82	0.39
3.12	ROBERTSON	0	0.00	0.00
3.13	ST. JOHNS PARK	0	0.00	0.00
3.14	SEVEN OAKS	0	0.00	0.00
3.15	SHAUGHNESSY PARK	0	0.00	0.00
3.16	GARDEN CITY	350	57.85	1.25
3.17	THE MAPLES	450	31.58	1.61
3.18	MARGARET PARK	0	0.00	0.00
3.19	INKSTER GARDENS	0	0.00	0.00
3.20	LEILA MCPHILLIPS	0	0.00	0.00
3.21	MANDALAY WEST	0	0.00	0.00
3.22	RIVERGROVE	0	0.00	0.00
3.23	RIVERBEND	0	0.00	0.00
3.24	TEMPLETON SINCLAIR	115	20.35	0.41
3.25	TYNDALL PARK	0	0.00	0.00
4.01	CHALMERS	405	21.15	1.45
4.02	MELROSE	0	0.00	0.00
4.03	TALBOT GREY	0	0.00	0.00
4.04	VICTORIA WEST	0	0.00	0.00
4.05	EAST ELMWOOD	0	0.00	0.00
4.06	KERN PARK	0	0.00	0.00
4.07	MUNROE WEST	115	35.38	0.41
4.08	RADISSON	0	0.00	0.00
4.09	WEST ELMWOOD	0	0.00	0.00
4.10	KILDARE REDONDA	55	9.24	0.20
4.11	KILDONAN DRIVE	630	76.83	2.25

NCA CODE	NEIGHBOURHOOD CHARACTERIZATION AREA	TOTAL NUMBER OF 5+ STOREY APARTMENT UNITS	% OF NCA RENTED UNITS WHICH ARE 5+ STOREY APARTMENT	% OF WINNIPEG RENTED 5+ STOREY APARTMENT UNITS
4.12	MUNROE EAST	375	26.50	1.34
4.13	ROSSMERE A	1195	39.64	4.27
4.14	CANTERBURY PARK	0	0.00	0.00
4.15	MEADOWS	0	0.00	0.00
4.16	MISSION GARDENS	0	0.00	0.00
4.18	RIVER EAST	90	36.00	0.32
4.19	SPRINGFIELD NORTH	0	0.00	0.00
4.20	SPRINGFIELD SOUTH	0	0.00	0.00
4.21	VALHALLA	1225	69.60	4.38
4.22	VALLEY GARDENS	230	22.89	0.82
4.34	ROSSMERE B	0	0.00	0.00
5.01	NORTH ST. BONIFACE	25	6.67	0.09
5.02	CENTRAL ST. BONIFACE	990	41.34	3.54
5.03	TISSOT	0		0.00
5.04	ALPINE PLACE	1330	60.73	4.75
5.05	ARCHWOOD	0	0.00	0.00
5.06	DUFRESNE	0	0.00	0.00
5.07	ELM PARK	0	0.00	0.00
5.08	GLENWOOD	0	0.00	0.00
5.09	HOLDEN	0	0.00	0.00
5.10	LAVALEE	10	3.45	0.04
5.11	MAGINOT	0	0.00	0.00
5.12	NORBERRY	0	0.00	0.00
5.13	NORWOOD EAST	155	16.76	0.55
5.14	NORWOOD WEST	0	0.00	0.00

NCA CODE	NEIGHBOURHOOD CHARACTERIZATION AREA	TOTAL NUMBER OF 5+ STOREY APARTMENT UNITS	% OF NCA RENTED UNITS WHICH ARE 5+ STOREY APARTMENT	% OF WINNIPEG RENTED 5+ STOREY APARTMEN T UNITS
5.15	ST. GEORGE	0	0.00	0.00
5.16	VARENNES	0	0.00	0.00
5.17	WORTHINGTON	955	49.61	3.41
5.18	KINGSTON CRESCENT	0		0.00
5.19	MINNETONKA	0	0.00	0.00
5.20	NIAKWA PARK	205	97.62	0.73
5.21	PULBERRY	295	60.82	1.05
5.22	SOUTHDALE	0	0.00	0.00
5.23	VICTORIA CRESCENT	0		0.00
5.24	VISTA	0	0.00	0.00
5.25	WINDSOR PARK	0	0.00	0.00
5.26	MEADOWOOD	0	0.00	0.00
5.28	RICHFIELD	0	0.00	0.00
5.29	RIVER PARK SOUTH	0	0.00	0.00
5.30	DAKOTA CROSSING	0	0.00	0.00
5.46	ISLAND LAKES	0		0.00
6.01	CRESCENTWOOD	0	0.00	0.00
6.02	BEAUMONT	0	0.00	0.00
6.04	GRANT PARK	490	50.52	1.75
6.05	MAYBANK	0	0.00	0.00
6.06	POINT ROAD	0	0.00	0.00
6.07	ROCKWOOD	500	62.50	1.79
6.08	VARSITY VIEW	80	26.23	0.29
6.09	WILDWOOD	0	0.00	0.00
6.10	AGASSIZ	0		0.00

NCA CODE	NEIGHBOURHOOD CHARACTERIZATION AREA	TOTAL NUMBER OF 5+ STOREY APARTMENT UNITS	% OF NCA RENTED UNITS WHICH ARE 5+ STOREY APARTMENT	% OF WINNIPEG RENTED 5+ STOREY APARTMEN T UNITS
6.11	CENTRAL RIVER HEIGHTS	120	66.67	0.43
6.12	CRESCENT PARK	0	0.00	0.00
6.13	EDGELAND	105	29.58	0.38
6.14	ERIC COY	0	0.00	0.00
6.15	FORT RICHMOND	195	13.45	0.70
6.16	J. B. MITCHELL	80	10.60	0.29
6.17	MARLTON	0	0.00	0.00
6.18	MATHERS	335	41.88	1.20
6.19	TUXEDO	0	0.00	0.00
6.20	NORTH RIVER HEIGHTS	0	0.00	0.00
6.21	OLD TUXEDO	0	0.00	0.00
6.22	RIDGEDALE	0	0.00	0.00
6.23	RIVERWEST PARK	0	0.00	0.00
6.24	ROBLIN PARK	0		0.00
6.25	ST. NORBERT	0	0.00	0.00
6.26	SIR JOHN FRANKLIN	0	0.00	0.00
6.27	SOUTHBOINE	0	0.00	0.00
6.28	SOUTH RIVER HEIGHTS	0	0.00	0.00
6.30	VIALOUX	120	47.06	0.43
6.31	WELLINGTON CRESCENT	0	0.00	0.00
6.32	WESTDALE	0	0.00	0.00
6.33	BETSWORTH	0	0.00	0.00
6.34	LINDEN WOODS	0		0.00
6.35	CLOUTIER DRIVE	30	75.00	0.11
6.36	ELMHURST	0	0.00	0.00

NCA CODE	NEIGHBOURHOOD CHARACTERIZATION AREA	TOTAL NUMBER OF 5+ STOREY APARTMENT UNITS	% OF NCA RENTED UNITS WHICH ARE 5+ STOREY APARTMENT	% OF WINNIPEG RENTED 5+ STOREY APARTMEN T UNITS
6.38	RICHMOND WEST	160	35.16	0.57
6.40	MONTCALM	670	38.40	2.39
6.41	RICHMOND LAKES	0	0.00	0.00
6.42	PARC LA SALLE	0	0.00	0.00
6.43	PEMBINA STRIP	850	69.11	3.04
6.45	SOUTH TUXEDO	0	0.00	0.00
6.46	WAVERLEY HEIGHTS	0	0.00	0.00

TABLE FOUR: RENTED "OTHER" DWELLING UNITS BY NEIGHBOURHOOD CHARACTERIZATION AREA

NCA CODE	NEIGHBOURHOOD CHARACTERIZATION AREA	TOTAL NUMBER OF RENTED "OTHER" DWELLING UNITS	% OF NCA RENTED UNITS WHICH ARE "OTHER"	% OF WINNIPEG RENTED "OTHER" UNITS
1.02	CENTENNIAL	385	43.26	0.74
1.03	MEMORIAL	2450	69.11	4.71
1.04	SPENCE	1350	79.88	2.60
1.05	WEST ALEXANDER	670	67.68	1.29
1.06	EARL GREY	735	63.36	1.41
1.07	EBBY WENTWORTH	70	60.87	0.13
1.08	DANIEL MCINTYRE	1350	63.38	2.60
1.09	LORD ROBERTS	360	44.44	0.69
1.10	MCMILLAN	1350	83.33	2.60
1.11	RIVER OSBORNE	1495	54.46	2.88
1.12	ST. MATTHEWS	925	76.76	1.78
1.13	WESTMINSTER	1535	78.12	2.95
1.14	WESTON	575	58.08	1.11
1.15	MINTO	175	33.65	0.34
1.16	RIVERVIEW	270	67.50	0.52
1.17	ROSLYN	115	5.36	0.22
1.18	SARGENT PARK	270	68.35	0.52
1.19	ARMSTRONG POINT	10	66.67	0.02
1.20	DOWNTOWN	2050	32.77	3.94
1.22	POLO PARK	0	0.00	0.00
2.01	KENSINGTON	0	0.00	0.00
2.02	BROOKLANDS	0	0.00	0.00

NCA CODE	NEIGHBOURHOOD CHARACTERIZATION AREA	TOTAL NUMBER OF RENTED "OTHER" DWELLING UNITS	% OF NCA RENTED UNITS WHICH ARE "OTHER"	% OF WINNIPEG RENTED "OTHER" UNITS
2.03	KING EDWARD	70	11.02	0.13
2.04	BRUCE PARK	210	41.58	0.40
2.05	DEER LODGE	115	56.10	0.22
2.06	PADDOCK	95	86.36	0.18
2.07	BIRCHWOOD	100	12.20	0.19
2.08	BOOTH	725	45.45	1.40
2.09	BUCHANAN	275	94.83	0.53
2.10	CRESTVIEW	980	86.34	1.89
2.11	GLENDALE	95	82.61	0.18
2.12	HERITAGE PARK	900	66.18	1.73
2.13	JAMESWOOD	20	4.12	0.04
2.14	STURGEON CREEK	335	64.42	0.64
2.15	SILVER HEIGHTS	560	65.50	1.08
2.16	KIRKFIELD	45	8.91	0.09
2.17	WOODHAVEN	0	0.00	0.00
2.24	WESTWOOD	180	78.26	0.35
3.01	DUFFERIN	255	41.13	0.49
3.02	WILLIAM WHYTE	840	55.45	1.62
3.03	BURROWS CENTRAL	190	37.25	0.37
3.04	LORD SELKIRK PARK	230	40.71	0.44
3.05	LUXTON	195	67.24	0.38
3.06	ST. JOHNS	1010	66.67	1.94
3.07	BURROWS KEEWATIN	655	93.57	1.26
3.08	INKSTER FARADAY	165	39.29	0.32
3.09	JEFFERSON	995	72.63	1.91
3.10	MYNARSKI	175	97.22	0.34

NCA CODE	NEIGHBOURHOOD CHARACTERIZATION AREA	TOTAL NUMBER OF RENTED "OTHER" DWELLING UNITS	% OF NCA RENTED UNITS WHICH ARE "OTHER"	% OF WINNIPEG RENTED "OTHER" UNITS
3.11	NORTH POINT DOUGLAS	255	45.95	0.49
3.12	ROBERTSON	20	23.53	0.04
3.13	ST. JOHNS PARK	140	96.55	0.27
3.14	SEVEN OAKS	105	61.76	0.20
3.15	SHAUGHNESSY PARK	160	59.26	0.31
3.16	GARDEN CITY	170	28.10	0.33
3.17	THE MAPLES	865	60.70	1.66
3.18	MARGARET PARK	360	96.00	0.69
3.19	INKSTER GARDENS	45	12.50	0.09
3.20	LEILA MCPHILLIPS	285	0.00	0.55
3.21	MANDALAY WEST	35	53.85	0.07
3.22	RIVERGROVE	0	0.00	0.00
3.23	RIVERBEND	0	0.00	0.00
3.24	TEMPLETON SINCLAIR	430	76.11	0.83
3.25	TYNDALL PARK	395	92.94	0.76
4.01	CHALMERS	1115	58.22	2.15
4.02	MELROSE	40	42.11	0.08
4.03	TALBOT GREY	210	62.69	0.40
4.04	VICTORIA WEST	100	62.50	0.19
4.05	EAST ELMWOOD	225	72.58	0.43
4.06	KERN PARK	95	79.17	0.18
4.07	MUNROE WEST	165	50.77	0.32
4.08	RADISSON	20	36.36	0.04
4.09	WEST ELMWOOD	120	55.81	0.23
4.10	KILDARE REDONDA	465	78.15	0.89
4.11	KILDONAN DRIVE	105	12.80	0.20

NCA CODE	NEIGHBOURHOOD CHARACTERIZATION AREA	TOTAL NUMBER OF RENTED "OTHER" DWELLING UNITS	% OF NCA RENTED UNITS WHICH ARE "OTHER"	% OF WINNIPEG RENTED "OTHER" UNITS
4.12	MUNROE EAST	960	67.84	1.85
4.13	ROSSMERE A	1690	56.05	3.25
4.14	CANTERBURY PARK	145	93.55	0.28
4.15	MEADOWS	85	94.44	0.16
4.16	MISSION GARDENS	125	86.21	0.24
4.18	RIVER EAST	145	58.00	0.28
4.19	SPRINGFIELD NORTH	30	35.29	0.06
4.20	SPRINGFIELD SOUTH	50	11.11	0.10
4.21	VALHALLA	530	30.11	1.02
4.22	VALLEY GARDENS	755	75.12	1.45
4.34	ROSSMERE B	175	71.43	0.34
5.01	NORTH ST. BONIFACE	265	70.67	0.51
5.02	CENTRAL ST. BONIFACE	1240	51.77	2.39
5.03	TISSOT			0.00
5.04	ALPINE PLACE	855	39.04	1.65
5.05	ARCHWOOD	0	0.00	0.00
5.06	DUFRESNE	35	58.33	0.07
5.07	ELM PARK	70	70.00	0.13
5.08	GLENWOOD	120	54.55	0.23
5.09	HOLDEN	25	71.43	0.05
5.10	LAVALEE	245	84.48	0.47
5.11	MAGINOT	260	96.30	0.50
5.12	NORBERRY	95	76.00	0.18
5.13	NORWOOD EAST	645	69.73	1.24
5.14	NORWOOD WEST	290	87.88	0.56
5.15	ST. GEORGE	125	65.79	0.24

NCA CODE	NEIGHBOURHOOD CHARACTERIZATION AREA	TOTAL NUMBER OF RENTED "OTHER" DWELLING UNITS	% OF NCA RENTED UNITS WHICH ARE "OTHER"	% OF WINNIPEG RENTED "OTHER" UNITS
5.16	VARENNES	90	64.29	0.17
5.17	WORTHINGTON	860	44.68	1.65
5.18	KINGSTON CRESCENT			0.00
5.19	MINNETONKA	95	73.08	0.18
5.20	NIAKWA PARK	0	0.00	0.00
5.21	PULBERRY	155	31.96	0.30
5.22	SOUTHDALE	605	93.08	1.16
5.23	VICTORIA CRESCENT			0.00
5.24	VISTA	45	69.23	0.09
5.25	WINDSOR PARK	585	88.64	1.13
5.26	MEADOWOOD	115	79.31	0.22
5.28	RICHFIELD	75	78.95	0.14
5.29	RIVER PARK SOUTH	680	91.89	1.31
5.30	DAKOTA CROSSING	0	0.00	0.00
5.46	ISLAND LAKES			0.00
6.01	CRESCENTWOOD	145	69.05	0.28
6.02	BEAUMONT	50	45.45	0.10
6.04	GRANT PARK	440	45.36	0.85
6.05	MAYBANK	275	91.67	0.53
6.06	POINT ROAD	80	66.67	0.15
6.07	ROCKWOOD	230	28.75	0.44
6.08	VARSITY VIEW	180	59.02	0.35
6.09	WILDWOOD	0	0.00	0.00
6.10	AGASSIZ			0.00
6.11	CENTRAL RIVER HEIGHTS	15	8.33	0.03
6.12	CRESCENT PARK	110	68.75	0.21

NCA CODE	NEIGHBOURHOOD CHARACTERIZATION AREA	TOTAL NUMBER OF RENTED "OTHER" DWELLING UNITS	% OF NCA RENTED UNITS WHICH ARE "OTHER"	% OF WINNIPEG RENTED "OTHER" UNITS
6.13	EDGELAND	205	57.75	0.39
6.14	ERIC COY	0	0.00	0.00
6.15	FORT RICHMOND	1115	76.90	2.15
6.16	J. B. MITCHELL	660	87.42	1.27
6.17	MARLTON	95	90.48	0.18
6.18	MATHERS	430	53.75	0.83
6.19	TUXEDO	100	50.00	0.19
6.20	NORTH RIVER HEIGHTS	50	40.00	0.10
6.21	OLD TUXEDO	0	0.00	0.00
6.22	RIDGEDALE	25	83.33	0.05
6.23	RIVERWEST PARK	55	68.75	0.11
6.24	ROBLIN PARK			0.00
6.25	ST. NORBERT	10	28.57	0.02
6.26	SIR JOHN FRANKLIN	95	54.29	0.18
6.27	SOUTHBOINE	185	94.87	0.36
6.28	SOUTH RIVER HEIGHTS	90	72.00	0.17
6.30	VIALOUX	115	45.10	0.22
6.31	WELLINGTON CRESCENT	25	41.67	0.05
6.32	WESTDALE	360	93.51	0.69
6.33	BETSWORTH	165	80.49	0.32
6.34	LINDEN WOODS			0.00
6.35	CLOUTIER DRIVE	0	0.00	0.00
6.36	ELMHURST	160	86.49	0.31
6.38	RICHMOND WEST	275	60.44	0.53
6.40	MONTCALM	1055	60.46	2.03
6.41	RICHMOND LAKES	0	0.00	0.00

NCA CODE	NEIGHBOURHOOD CHARACTERIZATION AREA	TOTAL NUMBER OF RENTED "OTHER" DWELLING UNITS	% OF NCA RENTED UNITS WHICH ARE "OTHER"	% OF WINNIPEG RENTED "OTHER" UNITS
6.42	PARC LA SALLE	95	95.00	0.18
6.43	PEMBINA STRIP	370	30.08	0.71
6.45	SOUTH TUXEDO	400	96.39	0.77
6.46	WAVERLEY HEIGHTS	325	94.20	0.63